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ABSTRACT

A guide to the identification and preparation of projects in the spheres of competence of UNESCO is presented in part in this document. The purpose was to help teams responsible for identifying and preparing projects in the field of education by indicating the main questions that arise in such work, the information to be gathered, the analyses to be made, and a number of examples that may be adapted to their needs. The document's preamble gives a summary of the most important points of the World Declaration on Education for All. The first of four sections of the guide contains a number of general notions and definitions concerning projects and the different stages of their preparation and implementation. The following three sections are devoted respectively to sectoral analyses, project identification, and project preparation; these are the three main stages in the formulation of a project. Each section is structured to include: an introduction; principal questions that have to be answered in the identification and preparation of projects; a detailed list of information to be gathered, analyses and studies to be undertaken, and methods and criteria to be adopted; and examples. The general principles and essential questions are applicable to all UNESCO's spheres of competence. The analyses, methods, and criteria, originally designed for the education sector, must be adapted to the sector and the nature of the project undertaken. (DB)

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ED 338254

Priority: Africa

Programme of Action proposed by the Director-General
(1990-1995)

Intersectoral Missions

Guide to the Identification and Preparation of Projects in Unesco's Fields of Competence

Education

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Strengthening Co-operation with the African Member States

Priority: Africa

Programme of Action proposed by the Director-General
(1990-1995)

Intersectoral Missions

Guide to the Identification and Preparation of Projects in Unesco's Fields of Competence

Education

Strengthening Co-operation with the African Member States

CAB-90/WS/3 CA/4 April 1990

INTRODUCTION

PURPOSE AND STRUCTURE OF THE DOCUMENT

This document is a part of the Guide to the identification and preparation of projects in the spheres of competence of Unesco. Its purpose is to help teams responsible for identifying and preparing projects in the field of education, by indicating the main questions which arise in such work, the information to be gathered, and the analyses to be made, together with a number of examples which may be adapted to their needs.

The method recommended in this part of the Guide is derived from the experience acquired in the programme of co-operation between Unesco and the World Bank; it is not the only method that can be used to identify and prepare projects, but it has the advantage of having proved its worth.

The document comprises a preamble and four sections. The preamble gives a summary of the most important points of the World Declaration on Education for All. The first section of the document contains a number of general notions and definitions concerning projects and the different stages of their preparation and implementation.

The three following sections are devoted respectively to sectoral analyses, project identification, and project preparation; these are the three main stages in the formulation of a project. Each section is structured as follows:

Introduction

A. Principal questions which have to be answered in the identification and preparation of projects.

B. Detailed list of information to be gathered, analyses and studies to be undertaken, and methods and criteria to be adopted.

C. Examples.

The general principles and essential questions are applicable to all Unesco's spheres of competence. The analyses, methods and criteria, originally designed for the education sector, must be adapted to the sector and the nature of the project concerned.

For a detailed discussion of projects, their place in planning, their advantages and drawbacks, and their sources of funding, the reader is referred to the following publications:

Warren C. Baum and Stokes M. Tolbert: Investing in Development, Oxford University Press, 1985.
A. Magnen: Les projets d'éducation: Préparation, financement et gestion, IIEP/Unesco, 1990.

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PREAMBLE

The World Declaration on Education for All, adopted in March 1990 by the Jomtien (Thailand) Conference emphasizes strongly the need for a "substantial and long term increase in resources devoted to basic education in the world": "The world community, including intergovernmental agencies and institutions, has an urgent responsibility, says this text, to alleviate the constraints that prevent some countries from achieving the goal of education for all."

The action to answer the basic education needs, which is annexed to the World Declaration on Education for all, defines the role of Unesco and other international institutions in the support they give to their Member States with a view to meeting their needs in this essential field: "International agencies and institutions, many of which are sponsors, co-sponsors, and associate sponsors of the World Conference on Education for All, should actively seek to plan together and sustain their long-term support for the kinds of national and regional actions outlined in the preceding sections. In particular, the core sponsors of the Education for All initiative (UNDP, UNESCO, UNICEF, World Bank) affirm their commitments to supporting the priority areas for international action presented below and to making appropriate arrangements for meeting the objectives of Education for All, each acting within its mandate, special responsibilities, and decisions of its governing bodies. Given that Unesco is the UN agency with a particular responsibility for education, it will give priority to implementing the Framework for Action and to facilitating provision of services needed for reinforced international co-ordination and co-operation.

"Increased international funding is needed to help the less developed countries implement their own autonomous plans of action in line with the expanded vision of basic Education for All. Genuine partnerships characterized by co-operation and joint long-term commitments will accomplish more and provide the basis for a substantial increase in overall funding for this important sub-sector of education. Upon governments' request, multilateral and bilateral agencies should focus on supporting priority actions, particularly at the country level in areas such as the following:

(a) The design or updating of national and subnational multisectoral plans of action, which will need to be elaborated very early in the 1990s. Both financial and technical assistance are needed by many developing countries, particularly in collecting and analyzing data, as well as in organizing domestic consultations.

(b) National efforts and related inter-country co-operation to attain a satisfactory level of quality and relevance in primary education. Experiences involving the participation of families, local communities, and non-governmental organizations in increasing the relevance and improving the quality of education could profitably be shared among countries.

(c) The provision of universal primary education in the economically poorer countries. International funding agencies should consider negotiating arrangements to provide long-term support, on a case-by-case basis, to help countries move toward universal primary education according to their timetable. The external agencies should examine current assistance practices in order to find ways of effectively assisting basic education programmes which do not require capital - and technology - intensive assistance, but often need long-term budgetary support. In this context, greater attention should be given to criteria for development co-operation in education to include more than mere economic considerations.

(d) Programmes designed to meet the basic learning needs of disadvantaged groups, out-of-school youth, and adults with little or no access to basic learning opportunities. All partners can share their experience and expertise in designing and implementing innovative measures and activities, and focus their funding for basic education on specific categories and groups (e.g., women, the rural poor, the disabled) to improve significantly the learning opportunities and conditions available for them.

(e) Education programmes for women and girls. These programmes should be disigned to eliminate the social and cultural barriers which have discouraged or even excluded women and girls from benefits of regular education programmes, as well as to promote equal opportunities in all aspects of their lives.

(f) Education programmes for refugees. The programmes run by such organizations as the United Nations High Commission for Refugees (UNHCR) and the United Nations Relief and Works Agency for Palestine (UNRWA) need more substantial and reliable long-term financial support for this recognized international responsibility. Where countries of refuge need international financial and technical assistance to cope with the basic needs of refugees, including their learning needs, the international community can help to share this burden through increased co-operation. The world community will also endeavour to ensure that people under occupation or displaced by war and other calamities continue to have access to basic education programmes that preserve their cultural identity.

(g) Basic education programmes of all kinds in countries with high rates of illiteracy (as in sub-saharan Africa) and with large illiterate populations (as in South Asia). Substantial assistance will be needed to reduce significantly the world's large number of illiterate adults.

(h) Capacity building for research and planning and the experimentation of small-scale innovations. The success of Education for All actions will ultimately be determined by the capacity of each country to design and implement programs that reflect national conditions. A strengthened knowledge base nourished by research findings and the lessons of experiments and innovations as well as the availability of competent educational planners will be essential in this respect.

The coordination of external funding for education is an area of shared responsibility at country level, in which host governments need to take the lead to ensure the efficient use of resources in accordance with their priorities. Development funding agencies should explore innovative and more flexible modalities of co-operation in consultation with the governments and institutions with which they work and co-operate in regional initiatives, such as the Task Force of Donors to African Education. Other forums need to be developed in which funding agencies and developing countries can collaborate in the design of inter-country projects and discuss general issues relating to financial assistance.

To fulfill the responsibilites for this purpose, and to assist its Member States in mobilizing international funding in the service of education for all, Unesco has prepared this Guide. Our hope is that these guidelines will allow national decision makers from less advanced countries and other officials, to analyse their education policies themselves and later to identify and prepare priority development projects which they wish to undertake with a view to achieving education for all in the spirit of Jomtien.

I. GENERAL REMARKS

What is a development project?

The term **project** is understood to mean a series of investments and other planned activities aimed at attaining specific objectives over a given period and within a given budget. The period of execution is often about five or six years. For example, the purpose of an education project may be the expansion and qualitative improvement of primary education in a particular region of the country concerned; its execution can extend over a period of five years, and it can be financed by a credit of $5 million exclusively allotted to its implementation.

A **programme** is a series of planned activities of broader scope than a project, and of longer duration (10 years or more). Its field of activities may cover either an entire sector - for example, education - or a subsector - for example, primary education or a major function of the system such as the preparation of school curricula and textbooks. A programme may consist of a series of projects aimed at the attainment of several related objectives. For instance, a programme whose objectives are the expansion and qualitative improvement of primary education in the country as a whole, over a period of 10 years, could comprise eight projects:

(a), (b), (c) and (d) the expansion and renovation of existing primary schools in each of the four regions of the country;

(e) the preparation, production and distribution of school textbooks;

(f) the in-service training of teachers;

(g) the creation of a system of ongoing evaluation of the quality of the education provided.

Development projects and foreign aid

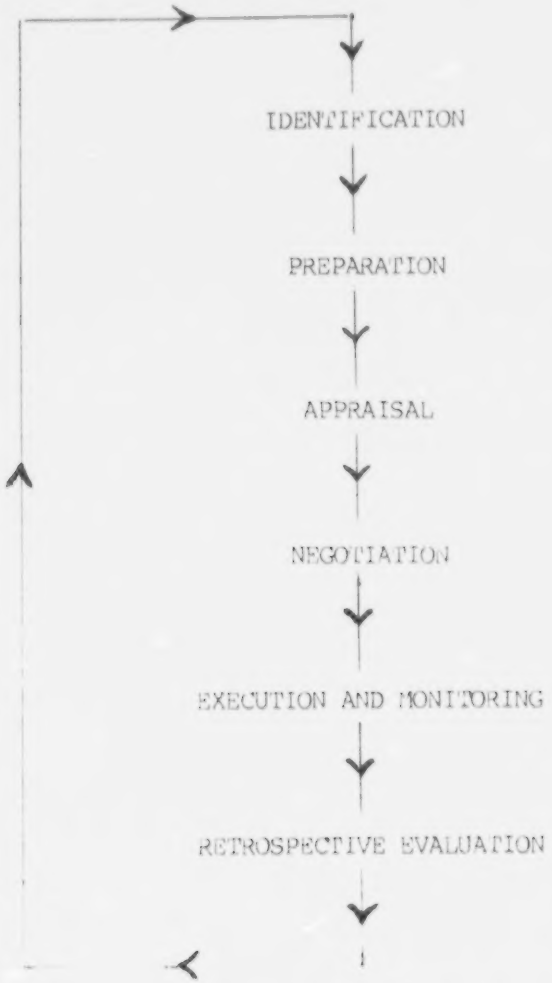
Projects funded by multilateral or bilateral external sources have been among the principal instruments of the action undertaken by African countries to develop education, science, culture and communication over the past thirty years. The funding organizations generally give precedence to this type of funding, notably by reason of the well-defined objectives and the clearcut nature of the projects concerned.

However, many governments, considering that they have little control over projects financed from external sources, aspire to an integral and cohesive implementation of their investment plans and programmes. Moreover, the financial crisis with which these countries are faced sometimes demands the complete readjustment of certain sectors. To this end, several funding organizations nowadays finance **sectoral programmes** whose purpose is to implement reforms covering a whole sector or subsector. **Sectoral adjustment loans** by the World Bank and promptly disbursed financial backing in favour of reforms belong to this category.

The methods of identification and preparation of projects advocated in this guide are applicable to sectoral programmes. For the latter are in the main implemented by projects which, in practice, scarcely differ from those that have gone before.

The project cycle

A project is customarily divided into several consecutive stages. This sequence is often referred to as the **project cycle**, because each stage is the logical successor of the previous one, while the last stage leads into the first stage of the following cycle (see below).



The first three stages of the cycle (identification, preparation and apporaisal) are the phase of design of the project.

The purpose of **identification** is to select one or several top priority projects for national development, and then to define their objectives, strategies and principal characteristics. Normally, responsibility for this falls on the Ministry in charge of the sector in question (education, science, culture or communication). When the needs and problems of the sector are not clear at the national level, experience has shown that it is difficult to make a relevant selection of priority projects. In such a case, the project identification is preceded by a **sectoral analysis**, otherwise known as a **sectoral review** or a **sectoral diagnosis.**

The **preparation** or **feasibility study** has two main aims: to study in detail all the aspects of the project in order to make sure that it is feasible; and to plan its execution. Responsibility for this, too, generally falls on the Ministry in charge of the sector in question.

Preparation is normally followed by an **appraisal** (or **prior evaluation**) of the project. This is done by the bodies which are going to finance it: the Ministry of Planning or Finance and/or the foreign funding organizations. The purpose of this more or less thorough study of the project is to ensure that:

(a) it is justified and feasible;

(b) its preparation is sufficiently advanced for its execution to begin within a short time.

The appraisal stage of a project usually ends with a **negotiation** between those responsible in the Ministry concerned and those responsible for financial decision-making. This negotiation leads to an agreement on the project and how it is to be funded.

Execution or **management** of the project lasts until the completion of the activities provided for in the project. **Monitoring** or **steering** is intended to detect the difficulties which may arise in the course of execution, so as to enable those in charge to remedy them in good time. **Evaluation during execution** (formative evaluation) is a provisional balance sheet of the project. Its purpose is to check whether the objectives are on the way to being attained, and if not to recommend changes in order to derive the fullest benefit from the action undertaken.

Retrospective evaluation is a final balance sheet of the activities and results of the project when it has been completed. Its purpose is to submit a report on the execution of the project to the authorities, and particularly to draw lessons for the future. It can in particular be taken into account for the identification of future projects.

The lessons of experience

Projects must be designed on the basis of experience. Though, on the whole, projects have been useful for the development of the countries in which they have been implemented, a number of them have either encountered serious difficulties in execution, or have led to disappointing results, thereby wasting considerable human and financial resources.

The procedures recommended in the sections which follow are based on experience acquired from projects in the past. Mention may be made at this stage of some points whose importance for the success of a project has been demonstrated:

(a) A **thorough knowledge of the sector** and its problems, which in particular makes it possible to estimate needs, demands and aspirations where change is concerned together with human and financial constraints.

(b) **A thorough identification and preparation** before the project is approved: a study of the alternative options that can be envisaged, an examination of the predictable difficulties of execution, and a report of previous projects in the country in question and in neighbouring countries.

(c) **Working in close concert with the national decision-makers** and those who will be responsible for the implementation of the project, together with the participation of the latter and if possible that of other national experts in the identification and preparation of the project.

(d) **Concerted action at an early stage with the funding organization** whose backing has been requested.

(e) **A clear definition of the objectives and strategy** of the project.

(f) Making allowance for a certain degree of **flexibility in the execution** of the project, in particular the inclusion of a **system of monitoring and evaluation** built into the project.

Methods and organization

Sectoral analyses, project identification and project preparation call for a variety of skills, both in the field in question (education, science, culture, communication) and in planning, economics, sociology and other fields, which vary according to the objectives of the project. For example, architecture, broadcasting, publishing, printing, etc. Consequently these studies are usually assigned to pluridisciplinary teams formed by the relevant administrative department. The co-ordination of the work is often the responsibility of the planner or the economist, in view of the essential role of their subject areas. As in any kind of teamwork, co-operation and dialogue between the different specialists involved are important factors of success.

In developing countries, it is frequently necessary to have recourse to foreign consultants to assist in the identification and preparation of projects. In Africa, it is preferable to call upon native African consultants of equivalent competence because of their knowledge of the environment and because they generally cost less than foreign specialists. But these factors must not lead to sacrificing skill and experience. Ultimately, the high fees of established experts are often amply justified by reason of the qualitative improvements and savings which they bring to the conception of projects.

The sectoral analysis, identification and preparation of projects require the gathering of available data, visits to the areas concerned, analyses, the preparation of proposals, and numerous consultations and meetings. This work cannot be based uniquely on the analysis of elements gathered in the capital; it also necessitates visits to different parts of the country. It requires contacts with:

- civil servants engaged in the sector in question;

- those responsible for, and experienced in, other sectors (Ministry of the Economy, Ministry of Planning, Ministry of Finance, Ministry of Labour, Ministry of Agriculture, public and private enterprises, trade unions, municipal authorities, and village communities);

- the future beneficiaries of the project (school children, families, teachers, research workers, operational personnel, auditors, and the general public).

The work of sectoral analysis and project preparation is sometimes assigned to National Commissions assisted by a team of international consultants. In this case, provision is made for at least two interventions of the international team:

- the first to help to get the project going and organize the work;

- the second to discuss the documents prepared by the National Commissions, participate in the choice of options, and help to shape up the final version of the report.

II. SECTORAL ANALYSIS

INTRODUCTION

A sectoral analysis or review is a critical analysis of the **resources, needs, problems and potential** of the sector in question (education, science, culture or communication) in a given country. The purposes of a sectoral analysis are usually as follows:

(a) to prepare a **critical balance sheet** of the potential and problems of the sector;

(b) to evaluate the **national capacity** and to implement the recommendable strategy, programmes and projects;

(c) to evaluate the various possible **strategies** for the future development of the sector, in the political context set by the Government, so as to help in selecting the most appropriate strategy;

(d) to recommend a certain number of **priorities** or **programme/project priority areas** in the light of the foregoing analysis.

A strategy is a coherent method of development or improvement reflected in a series of co-ordinated actions extending over a long period. In this series of actions, priority is given to fields in which the implementation of programmes or projects is judged important or urgent. A priority may relate:

- either to one aspect of a subsector (for example, the training of primary school teachers);

- or to a service covering the sector as a whole (for example, the production of school textbooks).

Apart from its value in project identification, a proper sectoral analysis makes it possible to prepare projects with a sufficient knowledge of their environment to guard against foreseeable difficulties.

The purpose of a sectoral analysis made in these perspectives is not to accumulate and analyse all the information available on the sector in question. It is not a university thesis. It is confined to the analysis of elements which are directly or indirectly useful in the choice and preparation of future projects. Furthermore, its cost must be reasonable, in relation to its utility. Experience shows that sectoral studies **centred on the analysis of "issue-oriented" problems** are the most appreciated. This is the approach we shall adopt here.

Sectoral analyses can cover a more or less extensive field depending on knowledge of the existing situation and on needs. They may cover an entire sector, or subsector (e.g. primary education), or again certain aspects only, with a view to updating or completing a previous study.

A. PRINCIPAL QUESTIONS

A1 What are the needs of the society concerned?

The study of the socio-economic context makes it possible to identify needs whose satisfaction calls for the development of the sector in question, or qualitative changes within that sector. For instance, a sectoral analysis of education poses the following questions:

A1.1 What new educational needs result from:

demographic evolution?

urbanization?

internal and external migrations?

A1.2 How is the social demand for education characterized? How is it evolving?

A1.3 What are the needs of the economy where human resources are concerned?

A1.4 What are the potentialities, imbalances and principal defects of the country where human resources are concerned?

A2 What financial resources are available?

A study of the financing of the sector is necessary in order to answer this question. Where the education sector is concerned, the following questions are posed:

A2.1 Is a satisfactory effort in respect of education being made by:

- society?

- the State?

- the beneficiaries?

A2.2 To what extent is the development of private education desirable? Is it possible?

A2.3 Is the share of public resources allotted to education satisfactory?

A2.4 Is the cost of education matched to resources and needs?

A3 What are the assets, potentialities and problems of the sector?

The core of a sectoral study generally lies in the answer of this question. Where education is concerned, three other questions arise:

A3.1 To what extent does the population have access to education? What inequalities of access to schooling exist at different levels?

A3.2 Is the **internal efficiency** of education satisfactory?

A3.3 Is the **quality** of education satisfactory?

A3.4 Is the **external effectiveness** of education satisfactory?

A3.5 Is the **teaching personnel** satisfactory in terms of numbers and quality?

A3.6 Are **school buildings and facilities** sufficient in number and quality to make satisfactory provision for educational activities?

A3.7 Is **educational administration** satisfactory?

Is **educational planning** satisfactory?

Does **educational research** receive sufficient attention?

A4 What are the orientations and characteristics of the national policy?

A4.1 What are the political choices and aims of the government and their consequences on the sector in question?

A4.2 What are the specific orientations of the national policy of development of the sector in question?

A4.3 What are the sectoral priorities of the principal political forces of the country?

A5 What strategies can be envisaged for the development of the sector in question?

A5.1 What results can be expected from each of them (i.e. what prospects of development)?

A5.2 What are the most appropriate strategies? On what criteria of choice are they based?

A6 In the light of the strategies adopted, what priorities can be recommended for future projects?

B. INFORMATION NEEDED, ANALYSES, METHODS AND CRITERIA

The following paragraphs give additional indications concerning the information to be gathered, the analyses to be made and the methods and criteria that can be used to answer each of the major questions contained in the previous paragraphs, taking education as the example in each case. In example No. 3 of this section (subsection C) is a list of the principal data to be gathered for a sectoral study of education. This list is only a general one, and should be adapted to the sector and the country being analysed.

What follows is valid not only for the sectoral analysis, but also for the identification and preparation of the project.

In the course of the preparation of a sectoral analysis, it frequently happens that some of the information necessary is not available. In this case the gap has to be filled either by seeking other indications or opinions enabling the situation to be clarified, or by making certain assumptions.

Among the sources of information, note should be taken of the importance of follow-up and evaluation reports of projects in progress or which have been completed. These valuable sources of information ought to be included under each of the headings which follow; but we have not done so in order to avoid extending the already long lists.

Lastly, it is important to analyse the causes and consequences of each of these problems, in order to be able to recommend and justify projects aimed at solving them.

B1 The needs of the society in question

B1.1 Demography

Information to be gathered

Total population by sex and by age-group (pre-school age-group, school age-group by grades, 15-64 group, 65 and over group), if possible by administrative region, and making a distinction between urban and rural areas:

- the last two population censuses;
- the present population;
- the projection for the period of reference of the study.

The birth rate, mortality rate and growth rate of the school-age population by grades, if possible by administrative region, and making a distinction between urban and rural areas.

Existing data and projects concerning internal and external migrations, and particularly concerning urban growth and rural exodus.

Analysis

What are the expected consequences of the demographic evolution on educational demands and needs?

Is the population growth rate satisfactory, too slow, or too fast for the needs of national development?

What are the expected effects of the development of education on demographic evolution?

Methods and criteria

See: Ta Ngoc Chau: Demographic Aspects of Educational Planning, Paris, Unesco/IIEP, 1980. The use of Sprague multipliers for interpolations concerning the number of pupils enrolled by age-groups.

Consult the demographic projects of the United Nations. See the studies concerning the influence of the school enrolment of girls on the birth rate, the infantile mortality rate, and demographic growth (World Bank).

International comparisons with the countries of the region.

B1.2 Social demand

Information to be gathered

Data on the evolution of the number of pupils enrolled and enrolment ratios by grade, sex and region, distinguishing between urban and rural areas (see B.3.1 below).

Opportunity cost and return on social and individual investment, by grade (see B2).

Analysis

By grade and by sex, what are the regions and urban/rural areas where the number of pupils enrolled and/or the enrolment ratios are steadily increasing? Stationary? Declining? What are the regions and areas in which schools and classrooms are overcrowded, and those in which the number of pupils are less than the number of places available? Special attention should be paid to rural primary education, which is at present neglected in certain regions of Africa.

When the demand for education is declining, what are the apparent causes of this phenomenon? Is the direct and/or indirect opportunity cost too high for families? Is there a shortage of adequately paid job opportunities by reason of the economic crisis and structural adjustment plans? Is the education provided of poor quality? Do the children have to travel too great distance to attend school? Is there competition from more popular non-official forms of education such as Islamic schools in certain West African countries?

Is this demand sufficient, insufficient or excessive in relation to the long-term needs of national development?

If necessary, how can it be stimulated or curbed?

Methods and criteria

Surveys of the social demand for education.

Summary opinion polls in the course of visits.

Discussions with specialists and the responsible authorities.

B1.3 Economic needs

Information to be gathered

Evolution of the GDP over the past five years in terms of constant prices, by economic sector.

Breakdown of the working population by occupational level and sector of economic activity; evolution over the past five years.

Number of foreign workers by occupational level and by sector of economic activity, in the last year for which figures are available.

Evolution of the number of school-leavers and holders of educational qualifications by level and type of education over the past five years.

Recent data concerning unemployment and under-employment by occupational level and sector of economic activity.

Existing studies and surveys on the demand for and the needs of wage-earning employment.

Average wages by occupational level and sector of economic activity in the last year for which figures are available.

Results of the follow-up of people holding educational qualifications.

Unit costs of the different types and levels of education (see B2).

Analysis

What are the priority levels and types of education from the point of view of the needs of the economy?

What are the present shortages of manpower in different sectors of the economy? Is there a shortage of skilled workers, technicians, engineers, or administrators?

Methods and criteria

Compare available information on present supply and demand, unemployment, and follow-up of people holding educational qualifications.

The account of:

- the possible need to replace foreign workers;

- the attraction of more or less high wages;

- the social individual yield of education, if it can be calculated.

Compare this information with international data on the breakdown of manpower by sectors of industry and occupational levels (Occupational and educational structures of the labour force, OECD, 1971; M. Zymelman, Occupational structures of industries, The World Bank).

B1.4 Human resources

Information to be gathered

Breakdown of the population over the age of 15 by sex, region (distinguishing between urban and rural areas) and educational level.

Information listed in B3.

Analysis

What is the illiteracy rate of the different segments of the population? What is their educational level?

How great is the imbalance in the level of education between sexes, regions, etc.?

What are the priority gaps to be filled with regard to the development of the country's human potential?

Methods and criteria

Calculation, if possible, of the social and individual return on education at different levels.

International comparisons, notably with other countries of the region.

B2 Financial resources

Information to be gathered

Public revenue and public expenditure on running costs and capital outlay over the past five years.

Breakdown of public expenditure on running costs and capital outlay by economic or social sector, over the past five years.

Breakdown of public expenditure on running costs and capital outlay for education, by level and type, and by category of expenditure (salaries, equipment, grants, etc.) over the past five years.

Private expenditure on running costs and capital outlay for education, by type and level of education, in the most recent year for which figures are available.

Average cost of schooling per pupil, by level and type of education, in private and public education, in the most recent year for which figures are available.

Number of pupils enrolled by type and level of education over the past five years.

Salary scales of teaching personnel in the public sector, by level and type of education and by professional qualification, in the most recent year for which figures are available.

The same data concerning the salaries of teachers in the private sector.

Foreign aid to education, by level and type of education and by purpose (capital outlay, technical assistance, scholarships, running costs, etc.) in the most recent year for which figures are available.

Analysis

B2.1 Financial contribution to education

Is the overall financial contribution of the society in question to education satisfactory, inadequate or excessive, in the light of overall resources, development needs and the requirements of other sectors? Can it be increased in the future?

Is the State's financial contribution satisfactory, inadequate or excessive, on the part of both the central government and regional or local authorities?

Is the financial contribution of the beneficiaries of education (families and pupils) satisfactory, inadequate or too heavy? Can the State increase its share of meeting the cost of education at the primary, secondary and higher levels? Is the development of private education desirable? Is it possible?

B2.2 Allocation of Budgetary resources

Is the distribution of budgetary allocations among levels and types of education matched to:

(i) the long-term needs of development?

(ii) the social demand?

Is the distribution of expenditure between running costs and capital outlay appropriate?

Is the distribution between salary costs and non-salary costs such as to ensure education of an adequate quality?

What adjustments in the distribution of budgetary allocations would make new resources available?

To what new resources could recourse be had to meet the needs of educational development?

B2.3 Costs of education

Are the numbers of educational personnel (teaching and non-teaching staff) sufficient, insufficient or excessive in relation to their workload at different educational levels and in different types of education (see B3.5)?

Do teachers receive a fair salary in relation to the salaries of other professions?

Is non-salary expenditure (in particular school textbooks) sufficient to guarantee a minimum standard of education?

Is capital outlay sufficient?

Methods and criteria

International comparisons, notably with other countries in the region.

Calculation of pupil/teacher ratio, ratio of teachers to total personnel, and ratio of teachers in service to total personnel.

Calculation of unit costs per pupil.

Calculation of the ratio between unit costs per pupil and GDP per capita.

Calculation of the ratio between the average salary of a teacher and the GDP per capita.

Visits to schools; gathering of data relating to budgets and costs.

Discussions with national and regional education authorities, the Ministry of Finance, parents' associations, etc.

B3 Assets, potentialities and problems of the sector

B3.1 Access to education

Information to be gathered

Population of school age by sex and by region, distinguishing between urban and rural areas.

Breakdown of number of pupils enrolled by level and type of education, by sex, and by region.

Cost of schooling and other expenses borne by families (see B2).

Surveys of family budgets in different regions and at different income levels.

Maps showing the distribution of schools in relation to the population distribution.

Analysis

Is primary education widespread?

What are the enrolment ratios at other levels? What possibilities do adults have of resuming or continuing their studies?

Inequalities of access to education between sexes, geographical regions, and urban and rural areas.

Analysis of the causes of inequality of access.

What measures can be suggested to improve access to education and reduce inequalities?

See also B1.2 (educational demand).

Methods and criteria

Comparison of enrolment ratios between boys and girls, between urban and rural areas, and between regions.

Distance children have to travel to go to school.

Calculation of how the cost of schooling and other expenses borne by parents affect the budgets of poor families.

B3.2 Internal efficiency

Information to be gathered

Structure of the education system.

Number of pupils attending school by year of studies, by sex and by region (distinguishing between urban and rural areas) over the past five years:

- in primary education

- in the various stages and types of secondary education

- in occupational training

- in higher education.

Breakdown by age of pupils in each year of studies, if possible by sex and by region (distinguishing between urban and rural areas), in the most recent year for which figures are available.

Number of grade repetitions and dropouts (and/or children not enrolled) by year of studies, in various types of education and at various levels, if possible by sex and by region (distinguishing between urban and rural areas) over the past five years.

Analysis

What are the dropout and grade repetition rates in the various types and at the various levels of education?

What is the percentage of pupils older than the norm for their grade?

What inequalities can be observed in these figures?

- between sexes?

- between regions?

- between urban and rural areas?

What is the extent of the consequent wastage of resources?

To what causes can this wastage and these inequalities be attributed?

What suggestions can be made to remedy them?

What objectives appear reasonable to improve internal efficiency?

Methods and criteria

Calculation of educational wastage.

Calculation of educational yield.

Comparison of the efficiency of different schools in different regions.

International comparisons.

Discussions with education authorities, teachers, pupils, research workers, inspectors and statisticians.

B3.3 Quality of education

Information to be gathered

Structure of the education system.

(a) **Scholastic achievement**

If possible, methodical evaluation of the scholastic achievement of pupils.

Failing that, scrutiny of examination results, pupils' examination papers, inspectors' reports, and teachers' opinions, particularly regarding the performance of new pupils who have completed a lower stage of education.

(b) Inputs

Curricula.

Availability, number and quality of textbooks and other teaching materials, and of premises and equipment for scientific and/or practical work.

Qualification of teachers; pupil/teacher ratios; assiduity of teachers (see B3.5).

Organization of inspection at different levels. Number and qualification of inspectors, and regional distribution. Credits and resources. Inspection reports.

Analysis

What position do pupils' average scholastic achievements occupy on the international scale?

Are the curricula well matched to the pupils' possibilities and to the goals of the various types of education? To what extent are they applied?

Do the pupils learn to read, write and count in their mother tongue?

Are teaching methods matched to the characteristics of the pupils? Do they enable the latter to pursue their studies under favourable psychological conditions?

Do the pupils have school textbooks and materials available in sufficient number and of acceptable quality?

Are the qualifications, training, motivation and assiduity of the teachers appropriate?

Are school premises such as to allow of normal school activities? Do existing facilities and equipment enable the pupils to carry out scientific experiments in accordance with the curriculum?

Are teachers and schools inspected regularly? How effective are these inspections in maintaining and improving standards? What qualifications and experience do inspectors usually have? What resources are available to them, in particular for their travel? What is the number of teachers or schools covered by each inspector? How many times a year, on the average, is each school inspected? What percentage of the inspectors' time is spent on inspection and what percentage on administration?

Methods and criteria

International comparisons, in particular with other countries in the region.

Discussions with pupils, parents' associations, teachers, professional associations, inspectors, administrators, etc.

Visits to schools.

Impromptu testing of pupils.

Examination of exercise books and answer sheets.

B3.4 External efficiency

Information to be gathered: see B1.3.

Analysis

Does the education provided satisfy the needs of the society in question, particularly from the point of view of employment? At what levels, and in what types or special fields, is there a shortage or a surplus of people holding educational qualifications?

See B1.3.

Methods and criteria

See B1.3.

B3.5 Teaching personnel

Information to be gathered

Breakdown of teaching personnel by professional qualification at the various levels and in the various types of education over the past five years.

Percentage of replacement teachers or teachers not fully employed in schools.

Percentage of teachers assigned tasks other than teaching.

Number of students and graduates of teacher training establishments, by level, over the past five years.

The status of teaching personnel. Prescribed weekly workload (teaching and other activities) by level.

Salary scales of teaching personnel (see B2).

Analysis

Is the teaching personnel numerically sufficient, inadequate or excessive in relation to the workload?

Is the percentage of replacement teachers who stand in for teachers who are temporarily unavailable reasonable or excessive, in particular in towns and among women teachers?

Does the pupil/teacher ratio (the average number of pupils per teacher) represent a reasonable compromise between the demands of quality and the cost of education? Is it excessive, entailing education of mediocre quality? Is it on the contrary too low, thereby entailing excessive expenditure?

Are the qualifications of teachers satisfactory? Does their training properly prepare them for their job? Do they have the opportunity of following refresher courses or of undergoing in-service training?

Does the shortage of qualified teachers necessitate recourse to the service of expatriate teachers?

Do teachers' working conditions give them an incentive in their work? Are they regularly paid? What are the difficulties of which they complain, particularly in rural areas?

What are the causes of the problems encountered?

How could they be remedied?

Methods and criteria

International comparisons, particularly with other countries in the region.

Calculation of pupil/teacher ratios and the ratio between active teachers and the total number of teachers.

Visits to schools, including training establishments.

Discussions with teachers, unions, school principals, inspectors, administrators, parents' associations, etc.

B3.6 School premises and equipment

Information to be gathered

Number of public establishments by level and type of education; if possible, the capacity and the number of pupils in public and private schools, in the most recent year for which figures are available.

For each level and type of education, percentage of schools;

- housed in rented buildings;
- housed in temporary premises or buildings of flimsy construction;
- which need rebuilding, renovating, or major repairs.

Space norms (number of square meters per pupil) by category of premises and by level and type of education.

Construction costs, per pupil, of recently built schools of different levels and types.

Principal sources of financing of school buildings and their maintenance:

- national budget;
- regional and local budgets;
- other national sources;
- foreign aid.

Analysis

To what extent do existing schools meet the needs of education at different levels and in different regions?

Are the buildings suited to the climate? And to teaching requirements?

Are existing premises fully and rationally utilized?

Are the buildings, furniture and equipment properly maintained?

Are the amounts allotted to the construction of schools, and their form of financing, satisfactory? Do they make it possible to ensure:

- regular maintenance of existing premises?
- repair or replacement of insalubrious, dangerous or dilapidated premises?
- investments necessary for increasing the number of pupils?

What are the causes of the problems encountered?

What suggestions can be made to remedy them?

Methods and criteria

Comparison of available data concerning existing schools and number of pupils.

Visits to schools.

Study of projects in progress.

Budgetary analyses (see B2).

Discussions with administrators, school principals, public works authorities, architects, parents' associations, etc.

B3.7 Administration, planning and research

Information to be gathered

Laws, decrees and regulations applicable to education.

Different ministries and government institutions responsible for formal and non-formal education facilities.

Organization of the Ministry (or Ministries) of Education.

Organization of services at the regional and local levels.

Organization of schools.

Administrative and planning personnel at various levels.

Administrative procedures, organization of the beginning of the school year, examinations, etc.

Organization of personnel management and financial management.

Tasks incumbent on the educational planning service. Its resources. Its organization and performance with regard to the gathering, preparation and publication of educational statistics. Studies prepared and published by the planning service.

Organization and performance with regard to the identification, preparation and execution of projects.

Organization and performance of institutions responsible for educational research. Their resources. Preparation of the research programme. Practical utilization of the results of research.

Analysis

Is the task of educational administration effectively performed:

- at the central level?
- at the regional level?
- at the level of individual schools?

Is the distribution of responsibilities among ministries, central bodies, regional delegations and schools such as to ensure a smooth functioning of the whole?

What is the management capacity of the administrative personnel? How effective is this management? For example, what percentage of salaried personnel is effectively in service?

Has the administrative personnel received a training for the job? What percentage of this personnel consists of teachers with no administrative training?

Educational planning: at the central and regional levels.

Are the decisions of the authorities concerning objectives, plans, programmes and projects prepared in advance by carrying out appropriate studies?

Are educational statistics regularly recorded? Are they reliable? Is the information they provide sufficient? How many months (or years) elapse between the beginning of the school year and the publication of the statistical yearbook? Are projects properly identified, prepared and implemented? Are they monitored and evaluated?

What is the capacity of the planning personnel? Is it sufficiently and appropriately trained?

Educational research: is it sufficient to establish guidelines for qualitative improvement? What are the strong points and the weak points?

Methods and criteria

Calculation of the ratios between administrative personnel and the personnel they administer.

Comparison of the tasks to be performed, the number of people responsible in each case, and the facilities and credits available to them for the performance of these tasks.

International comparisons, particularly in other countries of the region.

Discussions with the authorities, civil servants, teachers, unions, etc.

B4 National policy

Information to be gathered

The Constitution and other fundamental national texts.

Official declarations and publications concerning the national development policy and the sectoral policy; articles in the press, interviews with the authorities (ministers, for example).

National development plans.

Sectoral development plans.

Declarations and publications of the principal political and professional groups concerning the policy and the development of the sector in question; for example the "People's representative" of education, and the resolutions of the party congresses.

Normative texts and recommendations of international organizations (such as Unesco) to which the government has given its approval; resolutions of conferences and meetings of these organizations which have been supported by the national authorities.

Analysis

What are the implications for the sector in question of the aims and political options of the government? For example:

One party or several parties? Centralization or decentralization? Socialism or market economy? What place is assigned to ideology in education, science, communication, etc.?

What are the broad lines of the national social and economic development plan? Analyse its implications in respect of human resources and the expansion and/or changes which it calls for where education, science and communication are concerned.

Study in detail the orientations and proposals of the plan in the sector concerned (education, science, etc.) and those of the specific sectoral development plan, if it exists. Examine their cohesion and their compatibility.

Analyse the sectoral priorities of the principal political forces of the country, particularly the élite. How powerful are the interests involved? What consequences may these forces and interests entail with regard to the implementation of the sectoral development policy?

B5 Development strategies and prospects

Analysis

The analyses and proposals set forth above make it possible to establish a certain number of desirable strategies for the development and improvement of the sector in question. Where education is concerned, for example, each of these strategies may include a combination of measures aimed at:

- the quantitative expansion of the system (construction of new schools, training of more teachers);
- qualitative improvement (increased expenditure on school textbooks and materials, more frequent inspections);
- greater effectiveness (gradual reduction in dropouts and grade repetitions);
- reduction in costs (more pupils per teacher, higher percentage of active teachers, introduction of two-shift classes in urban schools, reduction in the amount of grants);

- increased educational resources and their better distribution (a higher share of the State budget allotted to education, changes in the distribution of budgetary allocations at different levels).

The validity and feasibility of these alternative strategies should be tested in order to facilitate the choice of the authorities.

In the case of education, the fundamental criteria of this choice are frequently:

(a) at the primary level, access to education; in other words, enrolment ratios;

(b) at other levels, the training of qualified personnel in sufficient numbers to fill the gaps foreseen;

(c) the possibility of the State bearing the recurrent costs of the implementation of the strategy. Capital outlay can, on the other hand, often be covered by foreign aid.

To this end, one may be led to make the following analyses:

Estimation of the order of magnitude of the future demand for qualified personnel on the basis of alternative projections of the evolution of the GDP of the major sectors of economic activity and of the productivity of these sectors.

Projection of the education system, retaining the existing parameters and without any improvements in efficacity or quality.

Comparison of projections of the supply and demand of people holding educational qualifications in order to estimate possible shortages or surpluses, taking account of the attraction of various occupations and the yield of education (see B1.3).

For each of these possible strategies, projection of:

- the number of pupils enrolled at different levels, distinguishing between urban and rural areas where primary education is concerned;

- the number of school-leavers holding educational qualifications at different levels;

- recurrent costs; comparison of forecast recurrent costs with the estimation of the available budgetary allocation;

- the number of teachers necessary;

- the investments necessary;

- the working population by sex and educational level, distinguishing between urban and rural areas.

Methods and criteria

These analyses may be performed manually.

However, the use of computerized **simulation models** is often advantageous. It makes it possible to test more numerous and more complex strategies - which are often called **scenarios** - to speed up calculations and to show the authorities clearly and quickly the possible impact of the financial and operational measures proposed. An example is given in sub-section C.

Among the educational simulation models that can be used on microcomputers, the following may be mentioned:

- the EDSTATS model (Programme for the analysis and projection of educational statistics, Unesco Office of Statistics), which enables the number of pupils, but not costs, to be simulated;

- the EDFISIMO model (M. Zymelman and F.K. Yee, Educational Finance Simulation Model, The World Bank, 1984), whose principal variable is the unit cost, and which is therefore particularly suitable for financial crisis situations;

- the flexible and diversified model adopted by the Unesco Division of Sectoral Analyses and Operational Policies (BAO/PSA), which can be adjusted as required to answer specific questions put by those responsible for establishing policies.

B6 Priority project areas

The areas covered by priority projects naturally depend on the strategy adopted. As we have seen in the introduction to this section, these are key areas for the future of the system in which it is important and urgent for the State to invest.

It frequently happens that the sectoral analysis reveals the need for **pre-investment studies** in order to clarify certain questions prior to the identification and preparation of the project. The report has to list the studies considered necessary. The studies may relate, for example, to the prospective school map; job opportunities for holders of educational qualifications; curricula; the future organization of a school; or some specific aspect of educational financing.

C. EXAMPLES

The examples which follow, and those in the subsequent sections, are taken from the archives of the Unesco Division of Financing of Education, from the IIEP, or have been specially prepared for this guide. They must not be considered as models. Some of them may have gaps, or even defects. Furthermore, they relate solely to the education sector. Lastly, since the studies from which most of them have been taken are closely related to their objectives and their context, it would be unwise to use these examples as they stand for other analyses, even in the education sector.

However, these examples have the advantage of giving a fairly precise idea of the content of sectoral analyses and analyses of the identification and preparation of projects in the various spheres of competence of Unesco, how they are presented and what they require. The teams responsible for such studies, even in sectors other than education, can take them as a basis for working out their own plans and working instruments.

The following examples are given below:

1. Contents of a sectoral analysis of education slanted on the problems of the sector.

2. Contents of a sectoral analysis of education.

3. Example of the list of data to be gathered for a sectoral study of education.

4. Basic data taken from a sectoral study.

5. Contents of a sub-sectoral study of higher education.

6. Contents of a sub-sectoral study of occupational training.

7. Contents of a sub-sectoral study of agricultural education.

8. Example of the use of a simulation model for testing different educational development strategies.

9. Summary of a sectoral study of education.

Example No. 1

BASIC EDUCATION SECTOR MEMORANDUM

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Page

BASIC DATA

EXECUTIVE SUMMARY

I. SOCIO ECONOMIC DEVELOPMENT TRENDS

Education Overview
Political and Economic Context
Education and Work
Education and Economic Growth

II. ISSUES IN BASIC EDUCATION

Low Coverage and Inequitable Distribution of Education
Low Internal Efficiency and Quality

III. MANAGERIAL CONSTRAINTS

Concentration of Responsibility
Inadequate Use of Information about the System Performance
Failure to Capture Local Resources
Lack of Coordination Among Foreign Financed Projects

IV. FINANCIAL CONSTRAINTS

Low Government Expenditures
High Unit Costs
Lack of Cost Recovery Mechanisms
Allocation of Funds Among the Various Educational Levels

V. STRATEGY FOR FUTURE EDUCATIONAL IMPROVEMENTS

Coverage Improvement
Improvements in Internal Efficiency
Improvements in Quality
Management Improvements

Example No. 2

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List of principal abbreviations

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Summary

Foreign aid priorities

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Physical and human geography
Population, economy and employment
Primary sector
Secondary sector
Tertiary sector
Public finances
Public expenditure on education
Foreign aid to education
Private expenditure on education
The 1978-1982 Development Plan

SECTION II - EDUCATIONAL PRIORITIES

National educational development objectives
Education and the economic and social development plan 1978-1982

A. Expansion of basic education in rural areas

Primary schools and literacy training centres
Resources required for the expansion of basic education
Difficulties in reducing the cost of primary education
Reform of primary education
Recommendations

B. Orientation of technical and higher education with a view to employment

Technical education
Recommendations
Agricultural education
Recommendations
Higher education

Example No. 3

CHECK LIST OF BASIC DATA
TO BE ASSEMBLED FOR EDUCATION SECTOR STUDY

I. Population

101. (a) Map showing main administrative boundaries.
(b) Total population by region, province, district, etc.
(c) Density of population by region, province, district, etc.

102 (a) Population by sex and school age-groups (primary, lower, secondary, etc.), breakdown by region, province, etc., most recent Census.
(b) Projections of 102 (a) for Education Sector Study reference period.

II. General Economic and Manpower Background

201. (a) GDP time series (last 5 years), and breakdown by industry sector.
(b) Projections of 201 (a) in constant prices for Education Sector Study reference period.

202. (a) Labour Force time series (last 5 years), breakdown by occupation and industry sector.
(b) Projections of 202 (a) for Education Sector Study reference period.

203. (a) Labour Force time series (last 5 years), breakdown by occupation and educational background.
(b) Projections of 203 (a) for Education Sector Study reference period.

III. Administration

301. Organigramme showing the different Government Ministries or department, parastatal and private organizations and agencies which have responsibilities for education and training services, formal and non-formal.

302. Organigramme showing the organization of the Ministry of Education.

303. Structure of the formal education system.

304. School calendar.

IV. Enrolments

401. Enrolment (male/female, public/private) by level and type of education, for most recent year available.

402. (a) Enrolment (male/female, public/private) in primary education by class (year of study), time series (last 5 years).
(b) Enrolment (male/female, public/private) in primary education by class and age, for most recent year available.
(c) Drop-out and repeating rates in primary education by class.
(d) Projections of primary enrolments for Education Sector Study reference period.

403. (a))
(
(b)) Secondary education
(
(c)) (same as for 402 - primary above)
(
(d))
(e) Breakdown of secondary enrolment for most recent year available by subject bias (if applicable), e.g. arts/sciences/teacher education/agricultural/commercial, etc.

404. (a) Enrolment (male/female) by class and subject bias in technical education and vocational training, time series (last five years).
(b) Projections of 404 (a) for Education Sector Study reference period.

405. (a)) Agricultural education and training (same as for 404 -
(
(b)) technical/vocational above)

406. (a)) Commercial education and training (same as for 404 -
(
(b)) technical/vocational above)

407. (a) Enrolment (male/female) by course and year of study in higher education and training institutions in the country, time series (last five years).
(b) Same as 407 (a) in institutions abroad.
(c) Projections of 407 (a) for Education Sector Study reference period.

408. Results of main examinations by level and type of education/training, time series (last five years).

409. Enrolment/participants in non-formal education and training institutions/activities.

V. Teachers and Instructors

501. Numbers of teachers and instructors by qualification and training in the various levels/types of education and training institutions, time series (last five years).

502. (a) Enrolments and outputs from the various teacher education/instructor training courses and institutions, time series (last five years).
(b) Projections of 502 (a) for Education Sector Study reference period.

VI. Curriculum

601. Number of hours per subject by class in primary education.

602. Secondary education (same as for 601 - primary).

603. Technical education and industrial vocational training (same as for 601 - primary, plus breakdown by theory and practical periods).

604. Agricultural education and training (same as for 603 - technical/vocational).

605. Commercial education and training (same as for 603 - technical/vocational).

606. Higher education (same as for 603 - technical/vocational).

VII. Financing

701. (a) Government revenue and expenditure, recurrent and capital (development), time series (last five years).
(b) Projections of 701 (a) in constant prices for Education Sector Study reference period.

702. Breakdown of Government recurrent and capital (development) expenditure by economic/social sector, time series (last five years).

703. (a) Breakdown of Government recurrent and capital expenditure on education and training by level and type of education and training, time series (last five years).
(b) Projections of 703 (a) in constant prices for Education Sector Study reference period.

704. Parastatal and private recurrent and capital expenditure on education and training by level and type of education and training, for latest year available.

705. Capital and recurrent unit costs (expenditure per student) by level and type of education and training for latest year available.

706. Teachers' salaries scales.

707. External aid to education and training, capital and recurrent by level and type of education and training, for latest year available.

VIII. School buildings

801. Number of schools (establishments) by public/private, and by level and type of education, for latest year available.

802. (a) Number of public schools in rented premises, by level and type of education, for latest year available.

(b) Number of public schools by permanent/semi-permanent/temporary premises, by level and type of education and training, for latest year available.

803. Space norms (square meters per student) by category of accommodation (i.e. classrooms, laboratories, dormitories, etc.) and by level and type of education.

804. Construction costs per student-place for institutions at different levels/types of education and training.

EXAMPLE No. 4

BASIC DATA(1)

1. General data

Area	27,834 km²
Population:	3.9 million
urban: 4%	
rural: 96%	
GDP(2)	35,700 million F.Bu.
GDP per capita(2)	9,150 F.Bu.)
Unit of currency: Burundi franc (F.Bu.)	US $1 = 90 F.Bu.

Percentage of the population aged 15 and over able to read and write (1970):

men	31.6%
women	4.8%
overall	17.9%

2. Education

	Pupils	% girls	Teachers	Ratio
Private literacy training centres	256,000	(n.d.)	2,720	94:1
Primary education	131,000	(39%)	4,220	31:1
General secondary education and teacher training	12,000	(40%)	750	16:1
Technical education (1977/78)	1,500	(n.d.)	160	9:1
Agricultural education	200	(5%)	20	10:1
Higher education:				
University	900	(13%)	100	9:1
Teacher training college (1975/76)(3)	300	(n.d.)	60	5:1

Enrolment ratio (in relation to 8-13 age-group):

Primary schools:	country as a whole	23%
	urban areas	92%
	rural areas	21%
Private literacy training centres		46%

3. Expenditure on education

Public expenditure on running costs of education:	889 million F.Bu.
as % of GDP(2)	2.5%
as % of recurrent public expenditure	20.1%

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(1) Unless otherwise stated, these data relate to 1976, and where education is concerned, to the school year 1976/77.

(2) At current cost.

(3) Now merged with university.

Unit recurrent costs[1] per pupil/year (as percentage of GDP[2] per capita):		
Primary education	2,950 F.Bu.	(33%)
General secondary education and teacher training	22,000 F.Bu.	(244%)
Technical education	41,000 F.Bu.	(455%)
Agricultural education	84,000 F.Bu.	(933%)
Higher education	168,000 F.Bu.	(1,867%)
Unit recurrent costs[3]		
Private literacy training centres	180 F.Bu.	(2%)

(1) Expenditure of the Government of Burundi alone.

(2) At current cost.

(3) Expenditure borne by the dioceses of the Catholic Church. (estimate).

Example No. 5

TABLE OF CONTENTS OF A SUB-SECTORAL STUDY OF HIGHER EDUCATION

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I. THE LESSONS OF PAST EXPERIENCE

- Students
- Teachers
- Schools
- Organization of studies

II. THE PRESENT SITUATION OF HIGHER EDUCATION

- The decline in enrolments, and its causes
- Teachers and student/teacher ratios
- Internal efficiency of the system
- Financial aspects
- The case of the University of ***
- General operating conditions

III. PROSPECTS AND RECOMMENDATIONS

- Quantitative prospects
- Social demand
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CONCLUSIONS

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2. Enrolments
3. Secondary vocational training centres
4. Age of pupils
5. Internal efficiency
6. Hourly workloads: comments
7. Further training of vocational training centre instructors
8. Costs
9. Teaching
10. Infrastructure and equipment
11. Refresher courses and further training

Chapter II - EMPLOYMENT AND OCCUPATIONAL QUALIFICATIONS: PRESENT SITUATION AND PROSPECTS

Chapter III - TRAINING/EMPLOYMENT - INPUT/OUTPUT FORECASTS

Chapter IV - RECOMMENDATIONS

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2. Operational improvement
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Example No. 7

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Objectives
Experience acquired
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Recommendations

CHAPTER III - TRAINING OF YOUNG FARMERS

Objective
Experience acquired
Government proposals
Recommendations

(a) Conditions of success
(b) Methods of intervention
(c) Suggestions to minimise risks

CHAPTER IV - MODERN AGRICULTURE AND AGRICULTURAL EXTENSION COURSES

Agricultural research and extension courses
Existing structure and methods of agricultural extension courses
Future prospects and recommendations

CHAPTER V - TRAINING OF RURAL DEVELOPMENT PERSONNEL: THE PRESENT SITUATION

Administration and planning
Organization of studies
Teaching staff
Material installations
Training costs

CHAPTER VI- NEEDS IN RESPECT OF AGRICULTURAL PERSONNEL AND PROPOSALS FOR THEIR TRAINING

Existing numbers
Predicted trend
Requirements in respect of agricultural and livestock-farming personnel
Requirements in respect of forestry personnel
Proposals
(a) Senior personnel
(b) Middle-grade personnel
(c) Training and refresher courses for agricultural instructors

APPENDIX - DESCRIPTION OF VOCATIONAL EDUCATION AND TRAINING IN THE AGRICULTURAL SECTOR

I. Ministry of Agriculture establishments

II. Ministry of Forestry and Fishery establishments

III. Ministry of Animal Production establishment

IV. SODE Training Centres

ANNEXES

(from 1 to 32)

Example No. 8

USE OF SIMULATION MODEL FOR TESTING DIFFERENT EDUCATIONAL DEVELOPMENT STRATEGIES

LIST OF SCENARIOS

Base year 1987/77

Simulations: 1987/88 to 2001/02**

Development of 1st stage of basic education

I. URBAN AREAS

HYPOTHESES

SCENARIOS	PUBLIC BUDGET: % total State/year	PUBLIC BUDGET: % education sector	% 1st stage education / year: Total	Urban	Rural	Economies	Private education (all forms)	Qualitative improvement/public yield
I. Basic scenario: existing trends in financing	1,5	27,7	1,5	1,5	1,5		High increase (9000/yr) of which an estimated two thirds rural, including new systems	New teachers: 100% MSC
II. Savings in public resources	1,5	27,7	1,5	1,5	1,5	In 1st stage, 65% to 85% of active teachers in 12 yrs; TS classrooms*: 60% new, 30% existing	as scenario I	New teachers: 100% MSC
III. Savings and qualitative improvement	1,5	27,7	1,5	1,5	1,5	as scenario II	as scenario I	New teachers: 100% MSC. Costs in 5 yrs, in CFA: - administration/teacher 36210 to 46210 - materials/pupil 203 to 503 % reduction in wastage, 6 to 15 yrs: dropouts 5 grade repetitions 10
IV. I with high increase in urban budget	1,5	27,7	1,5 1,5 1,5	2,53 1,97 1,5	0,5 1,0 1,5	- - - - - - - -	as scenario I	as scenario I
V. II with high increase in urban budget	1,5	27,7		as IV		as II	as scenario I	as scenario I
VI. III with high increase in urban budget	1,5	27,7		as IV		as II	as scenario I	as scenario III
VII. V with high increase in urban budget	1,5	27,7		as IV		as II	Increase: 9000/year, of which two thirds more new system rural schools	as scenario I

Table 3.1
Page 1/2

* TS = two-shift

** Simulation performed using the Magnen model, an adaptation of the Zymmelman model on Basic, better suited to the case of Mali.

LIST OF SCENARIOS

Base year 1987/77

Simulations: 1987/88 to 2001/02**

Development of 1st stage of basic education

II. RURAL AREAS

HYPOTHESES

SCENARIOS	PUBLIC BUDGET: % total State/year	PUBLIC BUDGET: % education sector	PUBLIC BUDGET: % 1st stage education / year Total	Urban	Rural	Economies	Private education (all forms)	Qualitative improvement/public yield
I. Basic scenario: existing trends in financing	1,5	27,7	1,5	1,5	1,5		High increase (9000/yr) of which an estimated one third rural, including new systems	New teachers: 100% MSC
II. Savings in public resources	1,5	27,7	1,5	1,5	1,5	In 1st stage, 65% to 85% of active teachers in 12 yrs; TS classrooms*: 60% new, 30% existing	as scenario I	New teachers: 100% MSC
III. Savings and qualitative improvement	1,5	27,7	1,5	1,5	1,5	as scenario II	as scenario I	New teachers: 100% MSC. Costs in 5 yrs, in CFA: - administration/teacher 36210 to 46210 - materials/pupil 203 to 503 % reduction in wastage, 6 to 15 yrs: dropouts 5 grade repetitions 10
IV. I with high increase in urban budget	1,5	27,7	1,5 1,5 1,5	2,53 1,97 1,5	0,5 1,0 1,5	- - - - - - - -	as scenario I	as scenario I
V. II with high increase in urban budget	1,5	27,7		as IV		as II	as scenario I	as scenario I
VI. III with high increase in urban budget	1,5	27,7		as IV		as II	as scenario I	as scenario III
VII. V with high increase in urban budget	1,5	27,7		as IV		as II	Increase: 9000/year, of which one third more new system rural schools	as scenario I

* TS = two-shift

** Simulation performed using the Magnen model, an adaptation of the Zymmelman model on Basic, better suited to the case of Mali.

SCENARIOS OF THE DEVELOPMENT OF FIRST-STAGE BASIC EDUCATION

PUPILS ENROLLED AND ENROLMENT RATIOS (1987/88 AND PROJECTIONS TO 2001/02)

Eff. = Enrolments in thousands
T.S. = Percentage
N.F. = New systems

Zones	Sector	Year	SCENARIOS I Eff.	I T.S.	II Eff.	II T.S.	III Eff.	III T.S.	IV Eff.	IV T.S.	V Eff.	V T.S.	VI Eff.	VI T.S.	VII Eff.	VII T.S.
URBAN AREAS	Public	1986/87	143,8	56,6	143,8	56,6	143,8	56,6	143,8	56,6	143,8	56,6	143,8	56,6	143,8	56,6
		1994/95	153,0	43,5	179,2	50,7	173,6	49,1	163,7	46,3	190,8	53,9	184,9	52,3	190,8	53,9
		2001/02	164,0	34,7	210,3	44,5	203,4	43,0	176,7	37,4	226,5	47,9	219,1	46,4	226,5	47,9
	Private (incl. NF)	1986/87	67,0	26,3	67,0	26,3	67,0	26,3	67,0	26,3	67,0	26,3	67,0	26,3	67,0	26,3
			(-)		(-)		(-)		(-)		(-)		(-)		(-)	
		1994/95	135,0	32,5	135,0	32,5	135,0	32,5	135,0	32,5	135,0	32,5	135,0	32,5	171,0	37,0
			(16,2)		(16,2)		(16,2)		(16,2)		(16,2)		(16,2)		(16,2)	
		2001/02	157,0	33,2	157,0	33,2	157,0	33,2	157,0	33,2	157,0	33,2	157,0	33,2	190,0	41,9
			(41,4)		(41,4)		(41,4)		(41,4)		(41,4)		(41,4)		(41,4)	
	Total	1986/87	210,8	83,0	210,8	83,0	210,8	83,0	210,8	83,0	210,8	83,0	210,8	83,0	210,8	83,0
		1994/95	288,0	76,0	314,2	83,2	308,6	81,6	298,7	78,8	325,8	86,5	319,9	84,8	361,8	91,0
		2001/02	321,0	68,0	367,3	77,7	360,4	76,3	333,7	70,6	383,5	81,2	376,1	79,6	416,5	89,9
RURAL AREAS	Public	1986/87	140,8	14,1	140,8	14,1	140,8	14,1	140,8	14,1	140,8	14,1	140,8	14,1	140,8	14,1
		1994/95	146,6	12,2	172,0	14,3	167,0	13,9	157,7	11,4	161,6	13,4	156,9	13,0	161,6	13,4
		2001/02	154,7	10,9	181,5	12,8	176,2	12,4	143,4	10,1	168,2	11,8	163,5	11,5	168,2	11,8
	Private (incl. NF)	1986/87	33,0	3,3	33,0	3,3	33,0	3,3	33,0	3,3	33,0	3,3	33,0	3,3	33,0	3,3
			(-)		(-)		(-)		(-)		(-)		(-)		(-)	
		1994/95	57,0	4,7	57,0	4,7	57,0	4,7	57,0	4,7	57,0	4,7	57,0	4,7	62,0	5,1
			(5,0)		(5,0)		(5,0)		(5,0)		(5,0)		(5,0)		(5,0)	
		2001/02	70,0	5,5	70,0	5,5	70,0	5,5	70,0	5,5	70,0	5,5	70,0	5,5	94,0	6,6
			(15,5)		(15,5)		(15,5)		(15,5)		(15,5)		(15,5)		(15,5)	
	Total	1986/87	173,8	17,4	173,8	17,4	173,8	17,4	173,8	17,4	173,8	17,4	173,8	17,4	173,8	17,4
		1994/95	203,6	16,9	229,0	19,0	224,0	18,6	194,7	16,2	218,6	18,2	213,9	17,8	223,6	18,6
		2001/02	232,7	16,4	259,5	18,3	254,2	17,9	221,4	15,6	246,2	17,3	241,5	17,0	262,2	18,4
ALL OF MALI	Public	1986/87	284,6	22,8	284,6	22,8	284,6	22,8	284,6	22,8	284,6	22,8	284,6	22,8	284,6	22,8
		1994/95	300,4	19,2	351,2	21,5	340,6	21,8	301,4	19,5	352,4	22,6	341,8	21,9	352,4	22,6
		2001/02	318,7	16,8	391,8	20,7	379,6	20,1	320,1	16,9	394,7	20,9	382,4	20,2	394,7	20,9
	Private incl. NF)	1986/87	100,0	8,0	100,0	8,0	100,0	8,0	100,0	8,0	100,0	8,0	100,0	8,0	100,0	8,0
			(-)		(-)		(-)		(-)		(-)		(-)		(-)	
		1994/95	172,0	11,0	172,0	11,0	172,0	11,0	172,0	11,0	172,0	11,0	172,0	11,0	193,0	12,3
			(21,2)		(21,2)		(21,2)		(21,2)		(21,2)		(21,2)		(21,2)	
		2001/02	235,0	12,4	235,0	12,4	235,0	12,4	235,0	12,4	235,0	12,4	235,0	12,4	292,0	15,4
			(56,9)		(56,9)		(56,9)		(56,9)		(56,9)		(56,9)		(56,9)	
	Total	1986/87	384,6	30,8	384,6	30,8	384,6	30,8	384,6	30,8	384,6	30,8	384,6	30,8	384,6	30,8
		1994/95	472,4	30,3	523,2	33,6	512,6	32,9	473,4	30,4	524,4	33,6	513,8	33,0	545,4	34,9
		2001/02	553,7	29,3	626,8	33,1	614,6	32,5	555,1	29,3	629,7	33,3	617,4	32,6	686,7	36,3

BASIC EDUCATION - 1st STAGE COUNTRY AS A WHOLE: SCENARIO 7

Parameters

General budget growth	1.5%
Education share growth	8.0%
Activity 1 budget growth	1.5%
Activity 2 budget growth	1.5%
Activity 3 budget growth	1.5%
Activity 4 budget growth	1.5%
Activity 5 budget growth	1.5%
Activity 6 budget growth	1.5%
Activity 7 budget growth	1.5%
Activity 8 budget growth	1.5%
Rural education & training budget growth:	
years 1 to 5	0.5%
years 6 to 10	1.0%
years 11 to 15	1.5%

Private schools enrolment growth	9000*
Private schools entrants growth	1500*
7 - 12 population growth	2.8%
7-year-old pop. growth	2.86%
Hours per week per pupil	32
% MSC level teachers recruited	100%
Dropout growth years 6 - 15	0
Grade repetition growth years 6 - 15	0
Cost of administration per teacher year 0	36.21
Growth in above cost	0
Cost of materials per pupil year 0	0.283
Growth in above cost	0

* + neighbourhood schools.

Urban

Number of pupils per class year 0	53.7
Weekly growth of pupils per class	0
Teachers' hours per week, year 0	21
Growth in teachers' hours per week, years 1 - 12	0.5
Public capital cost per place	64
% double-shift classrooms year 0	0%
Years 1 - 8: new	40%
existing	20%
Years 9 - 16: new	60%
existing	40%

Rural

Number of pupils per class	34.3
Growth of above years 1-6	1
Teachers' hours per week, year 0	30.3
Growth of above, years 1 - 12	0
Public capital cost per place	87

Public education: enrolments per grade, total, entrants (in thousands), % enrolment 7 - 12 and 7, budget, investments, improvements (millions of CFA F), unit cost(thousands of CFA F) total teachers, new teachers.

Year	1	2	3	4	5	6	T	Ent	% Enr	% 7 yrs	Bud	Const	Impr	Unit cost	TT	NT
0	73.2	57.5	52.9	49.7	32.6	27.2	294.6	58	22.8	21.7	5486	0	0	18.9	8418	0
1	97.6	53.9	47.7	48.8	38.9	27.8	289.1	64.3	22.5	27.1	5487	-59	67	18.9	8324	186
2	106.9	68.5	43.9	38	38.4	27.1	387.2	79.1	23.2	32.5	5578	803	67	18.1	8619	512
3	102.1	72.7	46.6	35.1	29.9	26.5	312.2	68.4	23	27.3	5653	28	67	18.1	8545	167
4	102	73.6	54.3	35.7	26.7	25.4	319.2	78.7	22.9	27.4	5738	134	67	17.9	8524	243
5	104.9	74.2	57.1	48.2	26.4	23.9	327.4	72.4	22.9	27.3	5824	215	67	17.7	8536	303
6	106.1	75.5	58.4	43	28.9	23.2	335.5	72.9	22.7	26.7	5911	258	67	17.6	8549	316
7	109.7	76.4	59.5	44.6	31.2	24.3	345.9	76.1	22.9	27.1	6000	735	67	17.3	8728	484
8	109	78.5	60.3	45.7	32.6	25.8	352.4	74.4	22.6	25.8	6090	394	67	17.2	8783	391
9	110.7	78.9	61.6	46.4	33.6	27.3	359.1	76.4	22.4	25.7	6181	99	149	17.2	8853	412
10	113	80.1	62.4	47.4	34.3	28.3	366.1	79.1	22.2	25.6	6274	187	149	17.1	8924	427
11	115.3	81.7	63.4	48.1	35	29.1	373.2	79.6	22	25.3	6368	149	149	17	8999	429
12	117.4	83.4	64.8	48.9	35.7	29.7	380.3	81.1	21.8	25.1	6464	158	149	16.9	9075	432
13	119.5	84.9	66.1	49.9	36.3	30.4	387.6	82.5	21.6	24.8	6561	167	149	16.9	9242	524
14	117.5	86.5	67.5	51	37.2	31	391.2	79.9	21.2	23.4	6659	13	149	17	9324	439
15	117.9	85.9	68.7	52	38.1	31.7	394.7	88.8	20.9	23	6759	19	149	17.1	9489	441

Private education: total enrolments (inc. neighbourhood & village schools), entrants (in thousands), % enrolment (7-12 & 7)

Year	T Enr	NS	Entr	% Enr	% Enr 7 yrs
0	100	0	15	8	6.5
1	109	0	16.5	8.4	6.9
2	110	0	10	8.9	7.3
3	127	0	19.5	9.3	7.7
4	138.3	2.3	21.3	9.9	8.2
5	151.9	6.9	23.6	10.6	8.9
6	165.5	11.5	25.9	11.2	9.5
7	179.1	16.1	28.1	11.9	10
8	193.2	21.2	30.5	12.4	10.5
9	207.3	26.3	32.9	12.9	11
10	226.9	36.5	36	13.7	11.8
11	245.7	46.7	39.2	14.5	12.4
12	264.9	56.9	42.4	15.2	13.1
13	289.2	72.2	46.5	16.1	14
14	313.5	87.5	50.5	17	14.7
15	337.8	102.8	54.6	17.8	15.5

Public + private education: total enrolments, entrants (in thousands), % enrolment (7-12 & 7)

T Enr	Ent	% Enr	% Enr 7 yrs
384.6	65	30.8	28.2
398.1	80.8	31	34.1
425.2	97.1	32.2	39.9
439.2	97.9	32.3	35.1
457.5	92	32.8	35.7
479.3	96	33.4	36.2
501	98.7	34	36.2
525	104.2	34.6	37.1
545.6	104.9	35	36.3
566.4	109.2	35.3	36.8
592.6	114.1	36	37.4
618.9	118.8	36.6	37.8
645.2	123.5	37.1	38.2
676.8	129	37.8	38.8
706.7	130.4	38.3	38.2
732.5	135.4	38.7	38.5

Example N° 9

Summary of an Education Sector Study

1. PRESENT SITUATION

Very poor country without mineral resources or oil.
Unproductive agriculture.
98% of the peasants are illiterate. Overdeveloped civil service
Constraint: slow growth of GDP and Government budget

FINANCIAL SITUATION

1.1 COSTS AND FINANCING EDUCATION

Catastrophic budget deficit.
Education = 33% of the State budget.
Basic education = 44% of the Education budget.
Literacy = less then 1%.
Other types and levels of schooling = 55% and growing rapidly. Very high unit costs: Scholarships

2. NATIONAL POLICY

Two main objectives:
a) Giving everybody (children and adults) a basic education relevant to the country's culture and needs. Reform of basic education underway (national languages, productive agriculture work = "ruralization").

b) Training cadres required for development.

3. PROBLEMS IN EDUCATION

3.1 Basic education

Low enrolment rate (20%), very slow growth with poor efficiency and quality. Slow implementation of the reform. School leavers apply for salaried, urban jobs.

3.2 Adult literacy

Developing slowly (3% of illiterates given literacy training in development project areas only.

3.3 Other levels and types of schooling

Training of agricultural extension officers and skilled workers: lack of training places in certain regions or trades.
Agricultural schools in second project incomplete due to lack of funding. Vocational schools in first project offer poor training due to lack of resources. Weak central management.

Secondary, technical and higher education: surplus of graduates compared to demand. Constraint: strong social demand.

3.4 Educational planning

Inadequate staff training.
Lack of equipment and funds.
No forecasting study.

4. STRATEGY

- acceleration of fundamental education reform
- Moderate expansion of basic education and literacy training, to be financed by in other types of education.
- Consolidation of existing investments.

PRIORITIES (PROJECT AREAS)

4.1 Primary education

Concentrating for 5 years on improving quality and implementing reform. Then growth of 5% per year (6-year old enrolment rate from 29 to 37% in 1990) which will require:
- training teachers;
- school mapping

4.2 Adult literacy training

- Expansion into new regions.
- Developing post-literacy training

4.3 Agricultural training

Completing and renovating existing agricultural schools

4.4 Technical and vocational training

Creating Division for Technical and Vocational Training.
Retraining technical and vocational teachers.
Improving ECICA and CFP (vocational schools, first project).

4.5 Educational planning and administration

Strengthening Directorate for Educational Planning and Supervisory Services. Training of Administrators.

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III. PROJECT IDENTIFICATION

INTRODUCTION

The purpose of identification is to select one or more top priority projects for national development and to define their objectives, strategy and principal characteristics. The early selection of projects during the stage of identification enables the operation of **preparation**, which is long and costly, to be confined solely to projects whose priority is justified in the eyes of the national authorities, and where applicable of the foreign funding organizations concerned. The project identification report thus frequently serves as a basis for an initial discussion with those who are to finance it, with a view to obtaining their prior agreement on the broad lines of the project.

It is advantageous for the planners responsible for identifying a project to be familiar with the principal criteria used by foreign sources of aid in order to select projects. Here, in broad outline, are the criteria adopted by international sources of aid, in particular the World Bank.

The principal criterion of selection is the **justification** of the project. This means ensuring that the project is essential to the development of the country and is in line with the national development policy, and possibly the national plan.

The two other criteria of selection which are the subject of more detailed study at the stage of preparation are the **feasibility** and **efficacity** (or profitability) of the project. A project is considered feasible when it is considered that its execution will not encounter any major obstacle and that it has a good chance of attaining its objectives. A project is considered efficacious or profitable when its cost in terms of financial and human resources is not excessive in relation to the advantages which may be expected of it.

These same criteria of justification, feasibility and efficacity are used by funding organizations in their **appraisal** or **evaluation** of projects.

The identification report is intended first and foremost to demonstrate to decision-makers that the project does indeed satisfy these criteria. Its other purpose is to plan the preparation and the subsequent stages of shaping up of the project. For example, it may comprise three sections:

(a) justification and objectives of the project;

(b) overall conception of the project (strategy, investments and costs);

(c) subsequent stages of shaping up.

A. PRINCIPAL QUESTIONS

A1 What are the justifications of the project in relation to the sectoral context?

A1.1 What needs of the society in question must the project meet?

A1.2 What problems of the sector concerned must the project help to solve?

A2 What is the sectoral policy of the government?

A2.1 On what sub-sectoral development strategy is the project based?

A2.2 Are all the parties involved in agreement on this strategy?

A3 What are the objectives of the project?

A3.1 How are they precisely defined? Who will the beneficiaries be? Are these objectives realistic?

A3.2 Do the objectives of the project cohere with the sectoral policy of the government?

A3.3 Is the complexity of the objectives of the project liable to make it difficult to manage?

A3.4 Are all the parties concerned in agreement with the objectives of the project?

A4 What is the overall project design?

A4.1 What is the strategy? What alternative conceptions of the project have been envisaged?

A4.2 What decisions will the government have to make?

A4.3 What investments and other inputs will be financed by the project? What will their approximate cost be, and by whom and how will they be financed?

A4.4 If provision is made for technical assistance, is it essential? Are all the parties concerned in agreement as to its necessity and its objectives?

A5 What are the main risks of failure of the project?

A5.1 What are the principal risks of failure from the socio-political point of view?

A5.2 Will the government be able to meet its share of the cost of the project?

A5.3 Will the government be able to bear the recurrent costs arising from the project when foreign aid has ceased?

A5.4 Will the government have sufficient human resources available to ensure the durability of the improvements brought about by the project when foreign aid has ceased?

A6 What remains to be done to prepare the project?

A6.1 What are the principal problems which remain to be solved?

A6.2 Are additional pre-investment studies necessary?

A6.3 What schedule of preparation is envisaged?

B. INFORMATION TO BE GATHERED; ANALYSES, METHODS AND CRITERIA

The first task that is necessary in the identification of a project is to specify its justification by describing the priority **needs** and/or **problems** to which it corresponds, and by showing that it is in line with **the national policy of development of the sector** in question. These points have already been dealt with in connection with sectoral analyses, and the reader is referred to sub-section B of section II, and in particular to the general remarks concerning the absence of data, the sources of information, and the analysis of the causes and consequences of the problems.

B1 Context and justification of the project

As we have seen in the foregoing section, the justifications of the project are based on the situation of the society in question and of the sector itself.

B1.1 The needs of society

See section II, headings B1.1 to B1.4.

Examples of justification related to the needs of society where an education project is concerned:

social justification: to increase the primary school enrolment ratio in order to satisfy the demand of families;

economics justification: to meet the needs of business and industry with regard to qualified personnel.

B1.2 Problems of the sector

See section II, headings B3.1 to B3.7.

Examples of justification related to problems of the sector where an education project is concerned:

educational justification: to improve the quality of education;

financial justification: to build classrooms to replace rented premises.

B2 Sectoral policy of the government

See section II, heading B4.

B2.1 Subsectoral development strategy

If no strategy has been laid down, or if the existing strategy is not satisfactory, discussions must be held with the authorities, in an ad hoc commission if possible, and then a proposal must be formulated and submitted to the relevant authorities. The strategy proposed may, for example, cover the following points:

the **objectives** pursued for the period in question; objectives to whose attainment the project must contribute, in other words the **development objectives** of the project;

the **components of the strategy** (e.g. the expansion of this or that type or level of education in a number of regions successively; the in-service training of teachers; the review of curricula; the printing and distribution of school textbooks, etc.);

the **teaching staff required**;

the **recurrent costs**;

the **investments required**.

The last three points are obviously intended to test the feasibility of the strategy from the point of view of human and financial resources.

Analysis, methods and criteria

See section II, heading B5.

The use of a computerized simulation model is recommended, for it quickly provides a picture of the demands and consequences of the various possible strategies.

B2.2 Agreement of the parties concerned

A consensus must be sought, under the aegis of the national authorities, on the components of the strategy. The parties concerned include not only the relevant departments of the Ministry responsible, but also other Ministries (e.g. the Ministry of Labour if technical education is involved) as well as the funding organizations to which application is made. Consultations with non-governmental groups (unions, associations, NGOs, for example) can also be useful.

For the presentation and discussion of the strategy, the use of the simulation model is recommended by reason of the advantages already mentioned.

B3 Objectives of the project

B3.1 Choice and definition of objectives

1. The development objectives having been specified in the sub-sectoral development strategy (B2.1), what we are concerned with here are the **immediate objectives** of the project, those which must be attained by the project during the period of its execution.

2. As shown by the examples given under heading B2, the definition of the objectives of the project is closely linked with its justification. In social projects, a distinction is often made between three types of objectives:

quantitative expansion: for example, an increase in school attendance;

qualitative improvement: for example, the improvement of educational standards through changes and innovations;

institutional development: for example, the strengthening of planning or research, or the creation of a new type of school.

3. One and the same project may be aimed at these three types of objectives.

Formulation of objectives

4. The objectives of a project must be qualified so far as possible; this will facilitate its subsequent monitoring and evaluation. The objectives are then expressed in terms of one or more **targets**: for example, improving the general and pedagogic training of 10,000 under-qualified primary school teachers (category D of the civil service).

5. The formulation of quantitative and/or qualitative objectives must be explicit, and it must describe, in verifiable form, the **expected results** of the project.

At the time of formulating these objectives, the question must be asked: "Does this formulation make it possible to appraise and evaluate the results of the project?".

Examples

WRONG FORMULATION: "train 250 teachers a year for primary schools" (what level, and what type, of training?).

WRONG FORMULATION: "prepare primary school curricula for rural schools" (for what purpose?).

CORRECT FORMULATION: "train 200 to 250 teachers a year (category B of the civil service) by means of a three-year programme which will qualify them to teach all the subjects in the curriculum of rural primary schools, including practical agricultural work.

6. If the project has several objectives, one should make sure that they are compatible with one another and they must be presented, so far as possible, **in order of importance**.

Expected results

7. The objectives of a project may be expressed in terms of the results expected at the completion of the project. For instance, if one of the objectives is to train 10,000 teachers to teach in national languages, the expected result could be:

"on completion of the project, 60 per cent of the teachers in service will be able to teach in one of the national languages, as compared with 10 per cent at present".

8. Like the use of quantified targets, the expression of objectives in terms of expected results facilitates the monitoring and evaluation of the project, provided that the initial situation is specified, as in the example above.

Realism

9. A project is feasible only if its objectives are realistic, that is to say if the expected results have a good chance of being achieved, in the light of the environment of the project, the investments and other inputs provided for, the personnel available, the time allotted to its execution, etc. In the past, many projects have failed because their objectives were not realistic. To judge whether the objectives proposed are realistic, planners must have a wide experience in the field. They must also make themselves familiar with the results of previous projects carried out in the country and in neighbouring countries, and the obstacles which they encountered (see under heading B above).

Objectives of reform and innovation

10. In the social field, projects involving reform and innovation have been shown by experience to involve a high degree of uncertainty by reason of the inadequate knowledge of the human environment in which they lie, and also by reason of the need to try out techniques and methods before generalizing them. However, the risks involved in this uncertainty are worth running, because innovation and change are at the core of the development process (see Adriaan M. Verspoor, Project management for educational change, the World Bank, 1986).

The objectives of projects aimed at reform or the introduction of innovations must therefore often be formulated in a tentative manner, leaving them a sufficient flexibility so that they may subsequently be adapted to changes which occur during their execution, thanks to the monitoring of their progress.

B3.2 Consistency between project objectives and the sectoral policy

It is very important to make sure that the objectives of the project are in line with the national development policy, and particularly the sectoral policy. Because of the often predominant influence of the funding organizations where projects are concerned, it may happen that the scrutiny of this cohesion is neglected at the identification stage. The resulting misunderstandings cannot fail to have an adverse effect on the success of the project.

Prior examination of the national development strategy of the sub-sector concerned (see B2.1) should ensure that the objectives of the project cohere with the national policy. However, it is important to check this once again when the objectives have been formulated.

B3.3 Complexity of the project

A project has a better chance of success if its complexity is matched to the management capacities of the national personnel. Experience shows that a simple project with a limited number of objectives has better prospects of success than a complex project in countries which lack experienced administrators.

It is therefore preferable to avoid projects of the "Christmas tree" kind which seek to satisfy the needs of different sub-sectors at one and the same time. In the face of competitive demands, it is often necessary for identification teams to resort to the arbitration of the authorities in order to keep a project relatively simple.

B3.4 Agreement of the parties concerned

See B2.2.

B4 Overall design of the project

B4.1 Choice of strategy

1. By strategy is meant all the co-ordinated activities deployed by a project, and the way in which they are combined in order to attain its objectives. In the social field, the training of personnel and technical assistance (B4.4) often have an important role to play in project strategy.

2. The choice of a strategy calls for the **examination of several alternative options**, followed by a comparison of their respective advantages and drawbacks, with reference to experience acquired in situ or in other countries and to the results of research. The criteria of this examination are, as we have seem, **feasibility** and **efficacity**.

3. The strategy selected must be **feasible**:

- **technically** (for example at the pedagogic level, if it is an education project);
- **administratively** (in line with the regulations in force and with the administrative capacities of the national personnel). As in the case of objectives, a strategy that is too complex may lead to failure if there is a shortage of competent administrators. It is from this angle that the options concerning the administration of the project should be examined; for example, in an occupational training centre, should provision be made for a board of directors in which employers are included? (see also para. 5 below);
- **socio-politically**: every strategy has social, political and cultural costs, which are admittedly difficult to evaluate accurately, but which it would be dangerous to ignore (resistances on the part of the groups concerned, possible repercussions on employment, on inequalities, on certain aspects of the national culture, etc.).

- **financially:** the costs and recurrent costs of the project which are incumbent on the government must be proportionate to available national resources (see 5.1 and 5.2 below).

4. The strategy must be **cost-effective.** In economic sectors, cost-benefit analysis or cost-effectiveness analysis is used to determine whether this is so. While the former is the subject of controversy in the social field, the latter may sometimes be used to choose between several options. For instance, to improve the quality of education in a specific context, is the most effective solution to step up teacher training or to provide the pupils with school textbooks? To step up teacher training, is it preferable to set up new teacher training establishments or to train teachers in service?

In any event, it is necessary to compare the approximate costs and the hoped-for results of the possible options in order to determine which is the most effective.

5. When the project is aimed at a reform or the introduction of innovations (see B3.1-10 above), the strategy, like the objectives, must often be formulated tentatively, leaving room for a certain flexibility; it must **try to anticipate obstacles and must make provision for a careful monitoring** of the implementation of reforms (see section IV, para. B8.4)

It may be worth undertaking:

- surveys among the future beneficiaries and participants in order to judge the acceptability of reforms before putting them into effect;

- campaigns to popularize reforms;

- an experimental phase to develop methods and procedures (e.g. educational methods).

6. With regard to the conception of school textbook projects, the reader is referred to Douglas Pearce: A Guide to Planning and Administering Government School Textbook Projects, Unesco, Division of Educational Sciences, Contents and Methods of Education, ED-88/WS/33.

B4.2 Decisions to be made by the Government

Any project involves a certain number of important decisions on the part of the Government; decisions which are often embodied in decrees, regulations, etc. It is important to list those decisions as early as possible so as to study:

- possible obstacles to be guarded against, which may sometimes cause the decision to be postponed (see above: administrative and socio-political feasibility);

- the time necessary for these decisions to be reached, which may lead to reconsidering the schedule of the project.

B4.3 Investments, other inputs, and costs

1. The inputs of a project are usually divided into three categories, physical investments, intellectual investments, and certain running costs.

Physical investments

2. In the course of identification, the planners study to a first approximation the location and size of the establishments covered by the project.

In the case of an education project, they may be led to recommend a detailed study of the **prospective school map** before the preparation of the project.

3. They examine matters relating to the quality of the buildings, furniture and equipment to be provided: for instance, are durable buildings requiring little maintenance, but which are costly, to be preferred to less sturdy buildings, which are cheaper? Should the equipment be very advanced, or rudimentary and easy to maintain? How will maintenance and repairs be ensured?

Intellectual investments

4. Intellectual investments have sometimes been neglected in the past. But they are often essential to bring about a lasting improvement in the quality of education, the efficiency of management, educational planning and research, and more generally the impact of projects on development.

The principal forms of intellectual investment are the training of the national personnel, studies, and technical assistance.

5. At the identification stage, all that is done is to make a preliminary study of these inputs in the framework of the strategy adopted and to determine approximately the **required number of persons and man/months.**

This preliminary study frequently raises fundamental questions. Where training is concerned, they include for example:

> How many people have to be trained in the light of the requirements of the project, and also in the light of predictable transfers to other functions? Can training be provided on the spot, or will candidates have to be sent abroad? In the latter case, what is the risk of a brain drain? If training takes place on the spot, can it be provided by technical assistance?

With regard to technical assistance, see B4.4.

Running costs of the project

6. In poor countries, or those subject to severe financial restrictions, the national budget has often proved unable to cover some of the running costs of projects, for example the purchase of supplies, the maintenance of equipment, or the bonuses considered expedient to motivate the personnel of the establishments involved in the project. Nowadays, the sources of foreign aid often agree to meet a share of the running costs which are essential to the success of the project. These costs may be regarded as investments.

It is important to define them and to calculate them to a first approximation at the identification stage.

Initial estimate of costs

7. Identification requires a preliminary study of the costs of the project (the detailed study, which requires a precise estimate of the investments involved, is made at the stage of preparation). This initial financial estimate is based on the average unit costs prevailing in the country concerned or in neighbouring countries. In an education project, for example, the approximate cost of building schools is based on the average cost per pupil in the level and type of education in question in the country concerned. The cost of furniture and equipment is similarly estimated. The cost of intellectual investments and of running costs is made on the basis of figures which have previously been determined (man/months, for example).

The compatibility of the total cost with the cost envelope envisaged for the project is checked. If it is not compatible, either additional financing must be sought, or the project must be pruned without sacrificing anything that is essential to its overall cohesion.

8. When the Government has to finance part of the cost of a project (counterpart contribution), this share must be calculated and the Government's ability to meet it must be checked (see B5.2).

B4.4 Technical assistance

Recourse to foreign technical assistance, that is to say, to foreign experts, specialists or consultants, raises numerous problems. In the first place, technical assistance is costly in relation to the salaries of the national personnel of developing countries. The salary of an expert may be 10 times that of a senior national civil servant. Furthermore, technical assistance, though usually efficient in operational tasks (teaching, management, planning, etc.) has by no means succeeded, in the past, in training national personnel. Consequently governments often hesitate to include substantial technical assistance in a project, especially when the project is financed by a loan.

These drawbacks, although real, are nevertheless often minor compared with the crucial need for foreign intellectual contributions to the development of under-equipped countries. While being prudent in the identification of needs where technical assistance is concerned, planners must therefore not hesitate to stress its necessity whenever there is a demonstrable need for it.

Here are some of the questions which they must ask at the identification stage:

Is technical assistance essential?

Are all the parties involved (beginning with the Minister) agreed on the need for, and the objectives of, technical assistance?

Would it not suffice to train national personnel?

Does the assistance proposed duplicate an existing programme?

Can technical assistance be recruited among nationals?

Can the necessary technical assistance be provided free of charge, for example through bilateral aid?

How will technical assistance be provided? By experts staying in the country for several years, or by the intermittent backing of consultants? What are the respective costs and effectiveness of each of the two solutions?

See: F. Lethem and L. Cooper: How to manage technical assistance in development projects, World Bank, 1984. This study analyses the operational experience of the World Bank and other institutions in the field of technical assistance; it gives very useful advice on the conception of technical assistance and training.

B5 Risks inherent in the project

It is important, at the identification stage, to examine the principal risks of failure of the project. Possible modifications in the conception of the project to minimise these risks are easier at this stage. If these modifications prove impossible, and if the project is nevertheless approved in its entirety by the Government and the funding organization, the problem will have been posed and the question can be re-examined at the stage of preparation, if need be after a special study of the question.

Certain obstacles compromise the proper execution of the project; others compromise its **durability**, that is to say, the durability of the improvements brought about by the project when foreign aid has ceased.

B5.1 Socio-political obstacles

Socio-political obstacles (see B4.1, 3) can compromise the proper execution of the project, and more often its durability. In this connection, it is useful to consult the national authorities, politicians and specialists, and resident representatives and experts of organizations providing aid, who are in the best position to assess the situation.

B5.2 Financing of the national counterpart contribution

The inability of the Government to finance its share of the cost of the project, or a delay in payment, is sometimes a serious obstacle to the proper execution of the project.(See above, B4.3, 8)

B5.3 Recurrent costs generated by the project

Experience shows that the lasting effects of a project depend first and foremost on the capacity of the national budget to meet additional recurrent costs generated by the project. For example, in an education project, the cost of equipment and materials essential to maintain a requisite standard of education, the cost of maintaining buildings and equipment, the cost of paper and ink for printing school textbooks, the supply of fuel, the repair of inspectors' vehicles, etc.

At the identification stage, it is advisable to calculate, to a first approximation (on the basis of existing unit costs for example), the additional recurrent costs which the Government will have to meet every year after the project has been implemented. These additional costs are then compared with existing budgetary allocations so as to estimate to what extent they can be borne. If they cannot be borne, the objectives of the project should be revised downwards. This estimate is made on more accurate bases at the stage of preparation.

B5.4 Human resources

The lack of trained and experienced personnel, despite efforts made to train them, is another frequent reason why certain projects do not have a lasting impact. Salaries in the civil service may be too low to prevent trained personnel from moving to other jobs (as in the case of technical teachers); they may be posted to unattractive places (as in the case of rural teachers); etc. This scrutiny may lead to proposing and discussing measures enabling sufficient human resources to be maintained in the schools concerned to ensure the durability of the project. Failing a decision on these points, the problem may be noted and examined more thoroughly at the stage of preparation.

B6 Tasks of preparation

B6.1 Problems remaining to be solved

We have already seen that identification sometimes raises some major problems which cannot be solved straightaway. The identification report should mention them, along with adequate comments in order that they may be reconsidered, and if possible solved, at the stage of preparation.

These problems may concern, for example:

- the funding of the project (the share of the Government or other local sources, recourse to other funding organizations);
- the strategy and inputs of the project (schools to be set up, the status of the personnel, training, technical assistance);
- measures to be taken to ensure the proper execution and/or the durability of the project (bonuses for teachers in rural areas, double-shift systems in urban schools).

B6.2 Pre-investment studies

The report should mention:

- the pre-investment studies necessary before the preparation of the project (e.g. detailed school mapping, inventory of school buildings);
- the source of funding of these studies;
- the arrangements made by the Government to carry them out (scheduled dates, responsible departments and bodies).

B6.3 Form and schedule of preparation

The report should mention the arrangements made and the schedule laid down by the Government (where applicable with the agreement of the funding organization) for the preparation of the project. An example is given in sub-section C of this section.

C. EXAMPLES

See the end of section II for general remarks concerning the examples given in this Guide.

The pages that follow contain:

1. An example of a **project brief** prepared following the identification mission of a fictitious project which the World Bank has been requested to fund.

2. An annotated specimen of the **guidelines for project formulation** taken from the official directives of UNDP. This type of document is prepared in an initial stage of formulation of UNDP projects, corresponding to the identification stage.

Example No. 1

OUTLINE OF A PROJECT BRIEF PREPARED FOLLOWING A PROJECT IDENTIFICATION MISSION BY THE WORLD BANK

*** (Name of country)

PROPOSED FOURTH EDUCATION PROJECT

PROJECT BRIEF

A. SECTORAL CONTEXT

1. A sectoral review mission visited *** in March 1984 and submitted its report to the Government, which accepted the principal conclusions and recommendations. This project brief is based on the analysis of the sectoral priorities set forth in the sectoral review, and on the observations of a project identification mission which visited the country in May 1985 and discussed these priorities with the Government.

Socio-economic background and prospects

2. *** is one of the least-developed countries in the world. It is a landlocked country, without any appreciable mineral resources, 80 per cent of whose population earn their living from agriculture and livestock-raising: only 6 per cent are wage-earners in the modern sector. The level of human resources development is among the lowest in the world. The illiteracy rate is 85 per cent and life expectancy at birth is about 40 years. Nearly 45 per cent of the population who have completed their education above the primary level are in civil service employment. 30 per cent of these in the education sector.

3. In the course of the past 15 years, the country's economic development has passed through three stages. From the late 1960s until 1975, the GDP declined at the rate of 1 per cent per year as a result of the drought. From 1975 to 1980, the GDP rose at the rate of 5 per cent per year as a result of expansion in the mining sector. Since 1980, structural changes in the world market led to the collapse of the mining industry in this country, and the growth rate has fallen by about 1 per cent annually. During this time, the population has grown at a rate of 3 per cent per year.

4. The present prospects are not very encouraging. Apart from its tremendous geographical, climatic, economic and human resources handicaps, the country has serious short- and medium-term debt-servicing problems. The amortization of public debt accounted for 30 per cent of public expenditure in 1985. The country's long-term development will depend firstly on the development of the agricultural sector and secondly on raising the levels of education and health of the population.

Group strategy of the World Bank

5. The World Bank wishes to play a more active role in helping the country to surmount its present difficulties and to formulate long-term development strategies. In terms of lending, it wishes to focus on the agricultural sector and on the development of human resources, as the fundamental basis for economic development in the long term.

Sectoral issues

6. Despite considerable progress in expanding education and training programmes since independence, *** is faced with several major problems where its education policy is concerned:

(a) The low level of human resources development. The illiteracy rate ..... The net enrolment rate in primary education is 20 per cent ..... The number of new entrants to primary education has been declining in recent years: from 30 per cent in 1983 to 24 per cent in 1985. One of the main causes is the shortage of schools and the deterioration of existing schools.

(b) Severe budgetary constraints. The share of the State budget allotted to education ..... Because of the mediocre economic prospects, additional public resources for the education sector are likely to be limited in the coming years. The prospects of an improvement in the quality of human resources will depend on the Government's ability to ease the tightening financial squeeze between rigid budgetary ceilings and rapidly rising costs.

(c) High unit costs in primary education. In relation to the average for sub-Saharan Africa ..... The causes are:

- The high cost of central administration
  .....
  .....

- The high cost of teachers' salaries
  .....
  .....

- The low level of internal efficiency
  .....
  .....

(d) The mediocre quality of primary education.
..... The main cause is the severe shortage of school textbooks.
.....

(e) High subsidies of post-primary education.
Fellowships constitute respectively ... per cent and ... per cent of the secondary and higher education budgets.

(f) Mismatching of education and employment. Projections indicate that the modern sector of the economy will be unable to absorb secondary school-leavers and higher education graduates already in the pipeline.
.....

(g) Weak planning and management capacity.
.....

The Government's sectoral policy

7. The Government aims, over the long term, to:

(a) broaden access to primary and secondary education;

(b) increase the output of vocational and technical training;

(c) reduce the role of the State and increase the role of local communities in financing education.

In the short term, in the framework of 1985-1988 plan of recovery, the Government proposes to maintain the existing levels of school attendance in primary, secondary and technical education, and to consolidate these levels. Where primary education is concerned, its quality and relevance will be improved. At the secondary level, emphasis will be placed on the teaching of technical subjects. In higher education, an attempt will be made to achieve a better match between education and employment by giving priority to scientific and technical areas of study.

The role and strategy of the World Bank in education and training in ***

8. The World Bank is currently funding its third education project in ***. Its aims are .....
It has broadened its sectoral dialogue with the Government in the context of the sectoral review (paragraph 1).

9. Given the issues raised in paragraph 6 above, and the policy of the Government (paragraph 7), the Bank should focus its education sector lending programme on assisting the Government to:

(a) reduce unit costs at all levels, and reallocate education resources;

(b) increase the coverage and improve the quality of primary education.

As a second priority, in the perspective of subsequent projects, the Bank should help the Government to achieve a better match between the needs of the economy and occupational training, secondary education and higher education.

B. PROJECT

Objectives, description and cost of the project

10. There are three major objectives:

(a) To lay the foundation for a future expansion of primary education:

(i) improve the efficiency of educational planning and administration by:

- strengthening the department responsible for planning and school construction;

- supply buildings, equipment and staff training for the institutions concerned;

(ii) reduce unit capital costs through:

- the development of cost-efficient school building and furniture using local materials and personnel;

- encouraging the human and financial participation of local communities in the construction of schools;

(iii) reduce unit recurrent costs through:

- reducing administrative costs;

- revising the status of teachers (entry levels, salaries, promotion prospects);

- increasing the average primary school class size from 35 to 40 in 10 years in schools where this is feasible;

- reducing the annual growth rate of student scholarships and transferring the resultant savings to primary education.

(b) To improve the quality and efficacity of primary education by:

(i) strengthening the national capacity for the preparation of textbooks;

(ii) preparing printing and distributing 1,000,000 textbooks and 100,000 teacher guides for all the primary schools in the country;

(iii) training teachers in the use of textbooks;

(iv) strengthening the system of distribution and storage of textbooks.

(c) To increase primary school enrolments by:

(i) building and equipping at low cost 1,000 classrooms and 100 housing units for school principals;

(ii) financial support for part of the incremental staff salary costs for a three-year period on a decreasing annual basis.

11. The total project cost for a five-year implementation period is estimated at approximately US $25 million, broken down as follows:

	$ millions
(a) Educational administration and planning	1
(b) Qualitative improvement	4
(c) Expansion of primary education	20

Specific issues

12. Successful implementation of the proposed project presupposes that, prior to or during appraisal, the issues outlined below be addressed and resolved to the satisfaction of the Government and the World Bank.

(a) Staff housing. It is the Government's policy to provide housing for each primary school principal. The pre-appraisal mission should assess whether this policy is justified.

(b) Incremental operating costs. The project cost includes the partial financing of the incremental recurrent costs of teacher salaries for three years on a declining annual scale, and also the salaries of educational planning and administration staff, also on a declining annual scale. Will the Government be able to bear these incremental operating costs after the project has been completed?

(c) Teachers' salaries and promotion. An estimate should be made of the extent to which changes could be envisaged in the salaries, entry levels and criteria of promotion, whether similar changes are introduced for the rest of the civil service or whether they are confined to teachers alone.

(d) Reduction of administrative costs. An important issue is to what extent it may be possible to reduce central administration costs, which in 1985 accounted for 35 per cent of the recurrent budget of the Ministry of National Education. This implies a possibility of transferring to active teaching many teachers who are currently performing administrative functions.

(e) Budgetary reallocations within the sector. The extension of primary education would be financially feasible if the Government could: (i) cut down on scholarships at the secondary and higher levels (by reducing the amounts allotted to them, by freezing them at their present level, or by slowing down their annual rate of increase); and (ii) reallocate these savings to primary education budget. To what extent are these changes desirable and feasible?

(f) Increase in the number of pupils per class. There are considerable variations in the number of pupils per class in primary schools. The feasibility of increasing the average class size and the effect of this on the quality of instruction, especially in rural areas, needs to be examined. The more so since the building of new classrooms in rural areas where the average number of pupils per class is already low would tend to reduce this number further.

(g) Village participation in school construction. A study is in progress, under the aegis of the Government, of current practice and results in this field. The findings of this study will help to define to what extent village participation could be increased, and how. For example, through creating a construction fund upon which villages and NGOs could draw in order to assist with the costs of materials.

Status of project preparation

13. With the help of Unesco, the Government has begun to prepare the project. Consultants, financed by the third education project, have been recruited to help with the preparation of the project where educational planning, architectural design, school mapping, and textbook development are concerned. The schedule for subsequent operations is as follows:

January 1987	Arrival of consultants for detailed preparation. Review of documents already prepared.
June 1987	Project appraisal mission.
June 1988	Negotiations.

Example No.2

ANNOTATED FORMAT
PROJECT FORMULATION FRAMEWORK

If the space provided is inadequate, please either use additional sheets or retype the framework in a form that suits your needs.

Country: _____
Date: _____
Project no.:_____ Proposed title:_____
(not to exceed 120 spaces)

Estimated duration: _____
Tentative UNDP + cost-sharing contribution: _____ Estimated counterpart costs: _____
Sources of funds (IPF, SMF/LDCs, cost sharing, others): _____

A. Development problem(s) intended to be addressed by proposed project

Causes Evidence

1. At sectoral or subsectoral level (the "macro" level):

2. At level subject to solution by the proposed project itself (the "micro" level):

B. Concerned parties/target beneficiaries

1. Who has identified the development problem and how has it come to the attention of UNDP?

2. What particular group or groups are intended to benefit from the solution of the development problem identified above at item A.2 (i.e., the target beneficiaries)? If appropriate, indicate the breakdown of the group(s) by gender.

C. Pre-project and end of project status

Describe in terms which are as objective and quantifiable as possible:

1. The present or pre-project situation:

2. The situation expected at the end of the proposed project:
(It will be useful here to think in terms of the systems or capacity which should be in place in order to provide on a sustained basis the desired outputs or services.)

D. Special considerations

1. Identify those special considerations (i.e., the integration of women in development, the environment, collaboration with NGOs/grass-roots organizations, TCDC, collaboration with the private sector, pre-investment and/or investment potential, etc.) which may be relevant to the proposed project and describe how they influence either the content (i.e., target beneficiaries, immediate objectives, outputs and activities) or form of the project (i.e., method of execution, using TCDC, NGOs, private organizations, etc.).

2. Identify any negative impact which the project may have on the environment or on particular groups, etc.

E. Other donors, programmes active in the same subsector

Identify and describe the linkage of the proposed project, if any, to the activities and programmes of other sources of external assistance in the same subsector. (Include, particularly, the regional, interregional and global programmes of UNDP, other funds and programmes under the authority of the Administrator such as the United Nations Capital Development Fund (UNCDF), the United Nations Trust Fund for Sudano-Sahelian Activities, the United Nations Development Fund for Women (UNIFEM), etc., as well as the activities of the regular and trust funds of other United Nations agencies.)

F. Development objective and its relation to the country programme

G. Major elements

(If there is more than one immediate objective, a separate sheet should be used for each. Please refer to the outline of the project document in subsection 2.2, below, for the layout.)

Immediate objective one:		How can it be determined if and when this proposed objective has been achieved (i.e., success criteria)?
Outputs	Activities	Party responsible for the activity
1.1	1.1.1	

H. Project strategy

1. Who are the people and/or institutions who would benefit in the first instance from the proposed outputs, activities, and activities of the project (i.e., the direct recipients)?

2. The target beneficiaries and the direct recipients of the project are not likely to be the same. Describe how the benefit proposed to be delivered to the direct recipients will lead to the benefit intended for the target beneficiaries (i.e., the project strategy).

3. Describe the implementation arrangements proposed for the project.

4. Identify any alternative project strategies and/or implementation arrangements which have been considered, and why they have been rejected in favour of the one(s) chosen.

I. Host country commitment

1. Describe the indications which show that the Government or other host country institution concerned will provide the counterpart support necessary for the project's successful operation and to sustain its results. Depending on the nature of the project, this may include such matters as the provision of full-time professional and lower-level project staff, premises, office and other types of equipment including vehicles, consumable supplies, etc.

2. Describe any legal arrangements necessary to assure that staff trained by the project will remain in their posts for a fixed period after their training.

J. Risks

(The instructions for heading F of the project document format refer. (See subsection 2.3, heading F, below.))

List below all those significant risks which could seriously delay or prevent the achievement by the project of its outputs and objectives.

Description of risk	Estimated likelihood (i.e., high, medium, low)
1. Factors which may at the outset cause major delays or prevent achievement of the project's outputs and objectives. (These are to be anticipated in the design of the project.)	
2. Factors which could over time cause major delays or prevent achievement of the project's outputs and objectives. (These are to be described in part F of the project document as an aid to project appraisal and management.)	

K. Inputs

1. Skeleton budget: Provide a summary estimate of total costs by major budget category.

	National inputs (specify currency and UN exchange rate)	External inputs (US dollars)
Personnel		
Sub-contracts (specify types of goods or services)		
Training		
Equipment		
Miscellaneous		
Totals:		

2. Comment on any proposed inputs which may raise policy issues on which headquarters guidance is sought (e.g., high equipment component, payment of local and recurrent costs, incentive payments).

Person(s) primarily responsible for this formulation framework: _____
Signature

Name :
Title:

IV. PROJECT PREPARATION

INTRODUCTION

Purpose and characteristics

Project preparation, sometimes referred to as feasibility study, consists of making a detailed study of all the aspects of a project for two main purposes:

(a) to ensure that the project is feasible and to determine what it will cost, so that it may be appraised by those responsible for its funding;

(b) to plan its execution.

The responsibility for the preparation of a project is usually incumbent on the Ministry in charge of the sector in question, possibly in collaboration with the funding organization.

By reason of the many different studies and tasks which it requires, the preparation of a project can be a lengthy and costly operation, sometimes extending over a year or more. It may comprise:

(a) **Pre-investment or feasibility studies** concerning specific questions; for example, possible forms of decentralization of the education system, possible options to give new impetus to scientific research, or the renovation and extension of the broadcasting system (see also section III, B6.2);

(b) the preparation of the **project document** (also referred to as the preparation report or the request for funding of the project) which sets forth in detail the objectives, composition, costs and administration of the project;

(c) the **detailed technical formulation** whose purpose is to prepare architectural plans and programmes of buildings which have to be constructed. It includes detailed lists of equipment, tender files, draft regulations, etc., all of which are essential before the beginning of the execution of the project proper. See Example No.4.

We shall confine ourselves here to examining the preparation of the project document, which is the most decisive phase of preparation, and which requires about three months. It is mainly the responsibility of the planners.

The project document

If it is to serve its purpose, the project document must meet the criteria of justification, feasibility and efficacity whose importance was emphasized in connection with identification in section III. To this end, it must contain a great deal of information and numerous analyses relating to the different aspects of the project and its costs, accompanied by detailed justifications.

In order to overlook nothing that is essential, it is convenient, in preparing this section of the document, to refer to the classic Quintilian hexameter: who, what, where, when, why, how? which is often abbreviated to "the five Ws and the H".

The planners responsible for preparing a project must in particular make every effort, calling upon their experience in the field, to foresee the difficulties which may arise in the course of execution so as to facilitate their solution in advance. Optimism has no place here. It is better to assume that the worst will always happen. The quest for a balance between a realistic anticipation of problems and a moderation of costs imposed by the shortage of available financial resources is sometimes tricky.

Presentation of the project document

Unesco, UNDP, the World Bank and other organizations have prepared standard tables of contents for project documents. Two of these tables are given as examples in sub-section C of this section:

Example No. 1: Contents of the document of an education project (Unesco, Division of Financing of Education).

Example No. 6: Contents of the project description taken from the official guidelines of UNDP.

These tables are very useful in making sure that nothing important is forgotten; but they should be adapted to the type of project concerned. They cannot be a substitute for an attempt to establish an integrated design of the project, which is the core of both its preparation and its identification.

As Example No. 1 shows, the project document usually contains information and analyses concerning:

- the justification and objectives of the project;
- the institutions assisted by the project;
- the components to be financed by the project, and their costs;
- the administration of the project;
- the feasibility of the project.

To make the text less dense and facilitate its reading, the numerical tables are generally contained in appendices.

A PRINCIPAL QUESTIONS

A1 What are the justifications of the project?

A1.1 What needs of the society in question must the project meet?

A1.2 What problems of the sector in question must the project help to solve?

A1.3 What changes have occurred since its identification?

A2 What is the sectoral policy of the Government?

A2.1 On what sub-sectoral development strategy is the project based?

A2.2 Are all the parties concerned in agreement with this strategy?

A2.3 What changes have occurred since the identification of the project?

A3 What are the objectives of the project?

A3.1 How are they precisely defined? Who will the beneficiaries be? Are the objectives realistic?

A3.2 Do the objectives of the project cohere with the sectoral policy of the Government?

A3.3 Is the complexity and/or the multiplicity of the objectives of the project liable to make it difficult to manage?

A3.4 Are all the parties concerned in agreement with the objectives of the project?

A3.5 What changes in the objectives of the project have occurred since its identification?

A4 What is the overall design of the project?

A4.1 What is the strategy? What alternative designs have been envisaged?

A4.2 What decisions has the Government made to implement the project? What decisions remain to be made?

A4.3 Is the overall design of the project well adapted to the local context? Is it realistic?

A4.4 What changes in the overall design of the project have occurred since its identification? For what reasons?

A5 What are the characteristics of the institutions set up and/or assisted by the project?

A5.1 In what way will their output (for example, the training they provide) contribute to the quantitative objectives of the project?

A5.2 How will the organization of these institutions, their methods of working and the qualifications of their personnel enable the qualitative and institutional objectives of the project to be attained?

A5.3 Are the organization, functioning and personnel of these institutions conceived with a view to efficacity and sound management? Have they been coherently planned so as to attain their objectives? Are they realistic, and do they fit into the local context?

A5.4 What alternative designs have been envisaged, and why has this one been adopted?

A6 What investments and other inputs will be funded by the project?

A6.1 Have buildings, furniture and equipment been rationally planned so as to attain the objectives set? Are they properly adapted to the local context? Do the choices adopted offer the best value for money?

A6.2 Can training be provided on the spot, or does it require studies abroad? In the latter case, what are the risks of a brain drain? If the training is provided on the spot, can it be provided by the technical assistance supplied by the project?

A6.3 If technical assistance is provided for, is it essential? Does it duplicate other programmes? Can technical assistants be recruited among nationals? Can technical assistance be provided free of charge by another source of aid?

What will be the objectives set for, and the tasks assigned to, technical assistants? What measures have to be taken for them to provide training for national personnel?

In what form will technical assistance be provided?

A6.4 What local running costs will be met by the project? Will the Government be able to meet these costs once the project is completed?

A7 What will the total cost of the project be?

A7.1 What margin must be allowed for unforeseen expenditure? What margin must be allowed for price increases? What share of the total cost will have to be financed in foreign currency?

A7.2 What will be the share of the Government in the direct financing of the project? What portion of the project will be financed by each of the funding organizations concerned?

A7.3 If the available funding is insufficient to cover the whole of the project, what arrangements can be envisaged to reduce its cost without conpromising the attainment of its objectives?

A8 How will the project be administered?

A8.1 Will the project be managed by a national institution or by the funding organization? In the former case, will it be managed by the authorities in charge of the sector which will benefit from it, or by a special unit responsible for the execution of the project?

A8.2 What arrangements must be made to facilitate the efficient management of the project?

A8.3 What arrangements have been made for the monitoring and evaluation of the project? Have those responsible for its management fully understood the need for this monitoring and evaluation?

A8.4 What will be the cost of the administration (including monitoring and evaluation) covered by the project?

A9 What will be the implementation schedule of the project?

A9.1 Will this schedule be established on rational bases?

A9.2 Is it realistic?

A10 What are the principal risks incurred by the project?

A10.1 What are the principal socio-political risks? The administrative risks?

A10.2 Will the Government be able to finance its share of the cost of the project?

A10.3 Will it be able to bear the recurrent costs generated by the project when foreign aid has ceased?

A10.4 Does the Government have sufficient human resources to ensure that the improvements brought about by the project will subsist after foreign aid has ceased?

A11 What remains to be done with regard to the preparation of the project?

A11.1 What are the principal problems which remain to be solved?

A11.2 Are additional studies necessary?

A11.3 What schedule is envisaged for subsequent operations? (preparation of architect's plans, lists of equipment, etc.)

B INFORMATION TO BE GATHERED; ANALYSES, METHODS AND CRITERIA

As in the other sections of this Guide, the indications in this sub-section, together with the examples given in sub-section C, concern the education sector. They have to be adapted to the specific context and needs of projects relating to the sectors of science, culture and communication.

The explanations which follow conform to the standard list used by the Division of Financing of Education for the preparation of projects financed by the World Bank (see Example No. 1 in sub-section C) and relate to the corresponding annexes (Example No. 2). The list and the annexes in question, established for projects concerning schools, must be modified in the case of the preparation of projects of a different type. They are not in any way models which have to be rigidly followed. But experience has shown that it is advantageous to use this list and these examples at the outset, in order that nothing important is overlooked.

B1 to B4 Justification, sectoral policy, objectives and overall design of the project

The project document contains certain components of the identification report, and adds to them if necessary. This is the case, in particular, with regard to the justification, objectives and overall design of the project. These components are however updated, added to or revised, notably when important changes in Government policy have occurred in the meantime, or when the identification has been too hasty. If a recent sectoral analysis exists, the project document will refer to it for further details on the situation of the sub-sector or the institutions concerned.

In this connection, the reader is referred to headings B1 to B4 in section III and headings B1 to B5 in section II.

B5 Institutions assisted by the project

1. This part of the project document analyses the organization, nature and functioning of the institutions assisted as they will be after the project has been completed. It must show what contribution these institutions make to the attainment of the qualitative and quantitative objectives of the project.

2. When these establishments involve an entire region or constitute a national network, the project document must therefore include, in summary form, a prospective map of existing schools and schools that are to be set up. This school map covers not only their geographical location, but also their organization, the characteristics of their pupils or students, their curricula, their methods, and their personnel.

3. In the case of an education project, this analysis must provide all relevant information concerning the educational rationality of the project. For example:

- If the project concerns the setting up of new schools, it is necessary to indicate the number of pupils provided for (Annex 3.21); their level and their geographical catchment area: and to show that the number of potential applicants will be ample to ensure that the schools in question will operate with the full complement of pupils.

- If a revision of the curricula is planned, it is necessary to indicate the strategy on which it rests (including how the revised curricula will be put to the test, how textbooks will be prepared, how teachers will be trained, etc.) so as to demonstrate their validity and realism, and also to establish the bases on which the cost of the operation will be calculated.

4. The weekly timetables given in Annex 3.31 (Examples 1 and 2), broken down by type of accommodation, form the basis for an estimation of the premises that will be necessary (see B6 below). When a revision of existing curricula is planned, recourse is had to an approximate breakdown of the broad pattern of timetables conforming to the lines along which it is planned to revise the curricula. For each subject, and for each year of studies, an indication is given of the number of hours (or periods, if they do not correspond to an hour) of teaching in each part of the premises (classrooms, laboratories, workshops).

5. The analysis of the location of schools must place emphasis on the degree to which it matches the objectives of the project and the operational needs of the schools themselves: communications, drinking water and electricity supplies, the proximity of areas in which pupils may carry out practical work in the case of an occupational training school, etc. In the case of an existing school which has to be renovated, converted, and/or enlarged, brief indications should be given concerning the existing installations, their condition, and the cost of renovations and repairs, estimated in terms of the percentage of the cost of a new building (see Example No. 5, sub-region C).

6. The project document must give the list of the personnel forecast for the schools concerned when the project has been completed, together with their salary level (Annexes 3.61 and 3.62) so as to be able to estimate recurrent costs generated by the project (see B.10 below). The annexes indicate the functions of the members of the staff in order to show that the latter are not excessive in number. For this purpose it is useful to calculate the average hourly cost of teachers and the ratios of pupils to teaching staff and pupils to non-teaching staff. If the available personnel do not possess the required qualifications, the document indicates the number of people to be trained in various specialized fields.

B6 Components to be financed, and their costs

Construction of new schools

1. The construction of new schools often accounts for an important share of the cost of education projects. In order to conform to the criterion of efficacity, the premises to be built must be designed to match needs; they must have a high **factor of utilization**, while preserving the margin of flexibility necessary for efficient functioning. In projects funded by the World Bank, school premises are planned so as to be used in rotation by different groups of pupils; consequently it is not planned, as is customary in some countries, to build a classroom for each grade.

2. The necessary school premises, their size and their cost are usually estimated by an architect. Before this estimation, the educators concerned must establish the **teaching load** on the basis of the curricula (Annex 4.11 of Examples 1 and 2; Table 1 below).

TABLE 1. Total teaching load and premises required (example)

Type of premises	Classrooms			Laboratories			Workshops		
Year of studies	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Number of grades per year of study	3	3	3	3	3	3	3	3	3
Number of periods per grade/year of studies	20	20	20	5	5	5	7	7	7
Total number of periods per year of studies	60	60	60	15	15	15	21	21	21
Total number of periods by type of premises		180			45			63	
Number of premises by type		6			2			2	
Utilization factor		83%			68%			88%	

N.B. In the above example, the premises are normally used for 36 hours a week (33 hours in the case of laboratories, allowing for the time required to prepare practical work). The utilization factor of the classrooms, for example is :

$$\frac{180 \times 100}{6 \times 36} = 83\%$$; that of the laboratories is : $$\frac{45 \times 100}{2 \times 33} = 68\%$$

This load is calculated in terms of hours or periods per week for each part of the premises (classrooms, laboratories, workshops, etc.). From this is deduced the number of separate divisions of the premises necessary, in the light of: (i) the weekly timetable of the school; and (ii) a utilization of factor of about 80 per cent in order to give the school principal the margin of flexibility necessary for the efficient running of school activities.

3. On the basis of this estimate, the architects must establish the **accommodation schedule, floor areas and costs (see sub-section C, Example No. 4) and a summary architectural programme indicating the characteristics of the premises.** The floor areas and costs are estimated in accordance with the usual norms in the country concerned, which must be compiled for the intention of the appraisal mission if the project is funded by a foreign organization. Sometimes the architects propose certain modifications to the norms in order to cut costs. The standard building costs are multiplied by a **distance coefficient** to take account of the distance between the schools and the points of production or arrival of materials. To this is added the cost of the **provision of services and utilities** such as roads, water supply, sewers, electricity, telephone lines, etc. The procedure is similar in the case of the renovation or enlargement of existing buildings (see Example No. 5). To establish tables of premises, floor areas and costs, architects often use computer software, which facilitates the quest for the best options, as well as subsequent adjustments.

4. The architectural preparation often involves a choice between several options in order to select the most cost-effective solution. For example, is it preferable to replace dilapidated classrooms, or renovate them? To construct buildings under State control or to have recourse to private contractors? To build housing for the personnel or to rent existing housing? The problems posed by the durability and maintenance of the premises call for special attention. Local materials and techniques are cheaper than imported materials, but they are less durable and require more maintenance, and this can be a serious drawback in countries where maintenance is neglected by reason of the chronic shortage of funds.

Furniture and equipment

5. It is the task of the educators to establish, in conclusion with the relevant departments, the lists of furniture (Annex 4.21) and equipment (Annex 4.22) required by schools and by operations such as the in-service training of teachers, inspections, etc. assisted by the project. It may be noted that school textbooks and library books are generally included in lists of equipment.

The **costs** are established in the light of experience of projects in progress, manufacturers' and importers' catalogues, consultation with suppliers, etc.

6. The lists of furniture and equipment for various types and levels of education must be matched to economic and budgetary constraints and to climatic conditions. In countries where operating budgets are low, it is better to confine these lists to essential items in order to reduce the cost of maintenance and supplies. In countries where

there are import quotas, it is preferable to use furniture and equipment which can be manufactured on the spot, provided that it is durable and of good quality. It is easier to maintain and to replace after the project has been completed.

In order to facilitate the maintenance and utilization of equipment, it is often useful to include a provision for spare parts and supplies in the lists of equipment. But this should be modest, so that the national budget may take over after the project has been completed.

7. In projects where equipment is a substantial item (technical education, occupational training, higher scientific education, school television, for example) the time available for the preparation of the project document often does not allow for the compilation of complete lists of equipment. In this case, the project document contains only an overall list (see Example No.4). Complete lists, which require time and specialized skills, are then prepared during the detailed formulation of the project, in conjunction with the teachers who will use this equipment, or failing that, other specialists.

Technical assistance and training of personnel

8. The main questions arising from the training of personnel and recourse to foreign technical assistance have already been dealt with in connection with the identification of the project. See section III, headings B4.3 and B4.44. See also the study by F. Lethem and L. Cooper already cited.

9. During the preparation of the project, the following procedure is recommended:

(a) establish an integrated strategy of technical assistance and personnel training in the framework of the general strategy of the project (section III, B4.1);

(b) on this basis, establish:

(i) the list of technical assistants required, the duration of their assistance, and their cost (Annex 4.31 of Example 1);

(ii) drafts of the mandates, or terms of reference, of the technical assistants;

(iii) the lists of grants and courses to provided, in situ and abroad, and their cost (Annex 4.41).

10. An integrated strategy of technical assistance and training makes it possible to co-ordinate these two types of measures with a view to meeting needs (functions to be allotted, tasks to be performed) and optimizing their quality and their cost. Some types of training may be provided by technical assistants, others may be provided on the spot or abroad. The establishment of the strategy calls for thought and choices relating to questions A6.3 above.

For example, discussions should be held with the national authorities concerning:

- the priority to be given either to resident experts or to short-stay consultants;

- arrangements to be made to select counterpart personnel and ensure their stability;

- arrangements relating to the promotion of personnel trained by the project, in order to give them greater motivation;

- the participation of senior personnel in the training of those under them, in order to facilitate the application of the methods taught.

A key element in the strategy is the timetable of technical assistance and training. This timetable must indicate all the training activities for personnel of the establishments and services concerned, the date on which counterpart personnel will be available, and the qualification of the latter. The timetable of technical assistance and training will be incorporated in the estimated implementation schedule of the project (B9 below).

11. The terms of reference of technical assistants must indicate as clearly as possible, but without going into excessive detail, the tasks which have to be performed; the timetable and duration of their services; the breakdown of functions between technical assistants and national counterpart personnel; the qualifications and experience desirable. See Example 4 below.

12. The preparation of training operations must:

- justify the number of senior personnel to be trained; experience shows that this number must be greater than the number of posts to be filled, because of possible wastage;

- enumerate the different interventions, allowing for a certain flexibility, together with how they are organized (locally or abroad, duration of session, study travel, recourse to local or foreign instructors, remuneration of the latter, subsistence and travel allowances of trainees, etc.).

Running costs financed by the project

13. Under this heading come costs which are considered essential to the implementation of the project, and which the country concerned is for the time being unable to pay (see section III). In Example No. 1, these costs come under the heading "4.5 Others". For example, expenditure on school supplies and minor items of equipment; the maintenance and functioning of equipment; inspectors' travel allowances; bonuses, and sometimes a share of the salary of certain key personnel when the latter are paid irregularly. In order that the improvements brought about may be lasting, it is preferable for recurrent costs financed by the project to be fairly modest in order that the national budget or other sources of funding may subsequently

be able to bear them. In order to facilitate the gradual takeover by the Government of these costs, the share of them borne by the project is sometimes calculated on the basis of a decreasing amount year by year.

B7 Recapitulation of the costs of the project (Example 1, 4.6 and 4.61)

1. The project document recapitulates all the capital outlay and related costs of the project in a table such as that shown in Example No. 4. The administrative costs of the project are included when they are borne by the project itself (under the heading "Education project bureau" in the example cited). Two provisions are added:

- a **contingency** provision, normally about 10 per cent;

- a provision for **price increases** designed to offset inflation which may occur during the period of execution of the project. Note that this applies to inflation in the currency or currencies of account of the project (US dollars or Special Drawing Rights in the case of a loan by the World Bank).

The percentage of the contingency provision may vary depending on the components of the project; for instance, it may be higher for those components which concern educational reform, because as we have seen their margin of uncertainty is greater than that of other components.

2. The recapitulative table of costs mentions the share of expenditure incurred in foreign currency. Some foreign sources of aid give priority to the financing of costs in foreign currency, which many States have great difficulty in obtaining. However, in the poorest countries, many funding organizations also finance a large share of the costs in local currency. But the calculation of the share financed in foreign currency is in any case useful in order that they may establish their funding plans.

3. It may happen that the recapitulation of costs reveals that, taking everything into account, the project will be markedly more costly than was foreseen. In this case, the Government and the funding organization concerned must either seek additional sources of financing, or come to an agreement on cuts to be made in order to reduce the cost of the project. In a situation of this kind, thought should be given at the stage of preparation to those components of the project which could be carried over to subsequent financing.

B8 Administration, monitoring and evaluation of the project

1. A section of the preparation document must deal with the management of the project, its organization, and the procedures adopted.

Development projects may be managed by the beneficiary State, by another public body (university, municipality, etc.) or by the foreign funding source. This last solution is frequently adopted in the case of bilateral aid.

Projects funded by the World Bank are managed by the beneficiary State. Their management may be assigned to the department concerned with the project when it has the necessary personnel and organization. For example, the primary education department if the project is aimed at developing primary education. The department in question then benefits from the inputs of the project where management is concerned (training of personnel, office equipment, etc.).

If the project concerns several departments or ministries, a solution frequently adopted is to assign its management to a project Bureau distinct from the departments which benefit from the project. This bureau can be attached to one of the beneficiary Ministries (e.g. the Ministry of Education) or to another Ministry (Public Works or Finance). In the case of an education project, these bureaux tend to be carried over from one project to the next.

An intermediate solution, combining the advantage of both these arrangements, is to assign the responsibility for the management of each of the components of the project to the sub-sectoral department concerned, and to assign the project bureau the task of co-ordinating the management of the project and assisting the management units in the fields in which they lack experience; for example, the purchase of equipment, financial management, monitoring and evaluation.

2. The management team of an education project funded by the World Bank comprises at least the following personnel:

- the director;
- an architect;
- a purchasing agent;
- an accountant.

This personnel is assisted by a subordinate staff whose numbers may vary. If the management is assigned to a separate project bureau, a full-time educator may be allocated to the latter in order to supervise technical assistance, training, and other educational aspects of the project.

3. To prepare the "Administration" section of the project document, the following questions - among others - must be answered:

Is the administration assigned to the beneficiary department or to a project bureau? In the latter case, to what ministry or department will it be attached? What personnel will be responsible for the administration of the project?

What management costs will be borne by the project? (personnel, personnel training expenses where necessary, equipment, outlay for the management bureau).

What measures should be taken to facilitate management? For instance, should provision be made for setting up a revolving fund? In education projects funded by the World Bank, the revolving fund, whose initial amount is advanced by the loan, usually covers three months of expenditure.

As in its other sections, the preparation document must justify the costs borne by the project, including evaluation costs (see below). A list of the personnel whose cost is borne by the project, together with their salaries, is essential.

Monitoring and evaluation

4. Monitoring and evaluation (see section I) form part of the administration of the project and must be prepared at the same time. **Monitoring** is a system of periodical information enabling those responsible for the management of the project to discern any malfunctioning and to take prompt steps to remedy it. It is part of the normal administrative activities of any project execution bureau. At the stage of preparation, it suffices to indicate those components which are somewhat tricky or uncertain and which require to be monitored with particular care; for example, those concerning qualitative changes and reforms.

5. **Evaluation** deserves to be defined more carefully at the stage of preparation, because it generally entails additional costs which have to be allowed for. It consists of an interim report of the implementation of the project, noting its stage of advancement and detecting deviations from the objectives and/or strategy and the difficulties encountered; where applicable, desirable changes are recommended. Evaluation during the execution of the project (formative evaluation) may be made either once, halfway through, or if there are special risks (see below B.10) two or three times during the execution. Evaluations carried out jointly by the Government and the funding organization (or by the Government, UNDP and Unesco) are often made. Annual financial **audits** of projects, required in the case of funding by the World Bank, form part of evaluations. Provision may also be made in education projects for other types of evaluation. For example the evaluation of scholastic attainments of pupils.

Lastly, a **retrospective evaluation** is often made at the conclusion of the project to establish the final balance sheet and to draw conclusions which may serve as lessons for subsequent projects.

The various types of evaluation may have recourse to outside consultants so as to have a more objective view. In any event, it is desirable for the project personnel to be brought into the picture where evaluations are concerned, so that the resulting decisions may be properly understood and applied.

B9 Implementation schedule of the project

1. The preparation document must include an estimated implementation schedule of the project. Its purpose is to programme the principal activities of the project so that their objectives may be attained at lowest cost and in the shortest time. The timetable must make allowance for the constraints imposed by the physical, economic and human environment, both national and international, **leaving a certain amount of leeway for inevitable delays.** The implementation schedule must fit in with the timetable of technical assistance and training mentioned above.

2. The implementation schedule is usually in the form of a horizontal planning table (see Example No. 4). It must be carefully prepared so that the various activities involved in the execution of the project occur during the appropriate period, in order that the institutions which have been set up or improved may start up as early as possible and operate under the conditions planned.

To prepare the schedule, it is advisable to begin with the components of a project whose implementation will require most time (these elements constitute the limiting factor); then to adjust the other components in the light of the dates on which their inputs have to be available.

For example, in the schedule concerning the Kangabo-Niono project, the limiting factor is the building work; in view of the time necessary for the detailed technical preparation of the project (architects' plans, tenders, adjudication, etc.), the work cannot begin until the second quarter of 1984. Since it will last slightly more than a year, the teacher training colleges will not open until September 1985. The recruitment of teachers must therefore begin a year previously in order to enable them to follow refresher courses or be trained in existing teacher training colleges. The equipment and furniture must be ordered early in 1984 so that it arrives in time. Hence the corresponding invitations for tenders must be prepared in 1983. The consultant responsible for helping to revise the curricula must arrive about a year before the teacher training colleges open. The study tour of those responsible must take place as early as possible so that account may be taken of their conclusions when the curricula are revised.

B10 Risks, feasibility and durability of the project

1. The preparation must assess the socio-political, administrative, institutional and financial risks involved in the project. Will the project be feasible, in other words will it attain its objectives without any major difficulties? Will it be lasting, in other words will the improvements brought about subsist after the project has been completed? To answer these questions, the planners must carry further the analyses made at the identification stage (section III, B5). For example, they can bring together representatives of parents, students, teachers, administrators, etc. to make sure that the project is politically and socially acceptable, to develop feasible solutions to administrative problems, or to explore the possibilities of extra-budgetary financing.

2. **The durability of the effects of a project depends primarily on the ability of the national budget to bear the additional recurrent charges generated by the project.** At the stage of preparation, the planners must estimate these costs more accurately than at the stage of identification. To this end, they estimate the annual expenditure of each institution that has been assisted, as this expenditure will be under normal operating conditions after the project has been completed: expenditure on personnel, equipment, maintenance of premises, furniture and equipment, meals and/or grants for pupils, etc. An example of such an estimate is given in Example 4 below.

These costs are calculated on the basis of unit costs recorded in the country concerned for these different types of expenditure; they must be corrected realistically in order to make them compatible with the objectives of the project. If it is a question of the extension or improvement of existing schools, the costs generated by the project are of course equal to the difference between the forecast expenditure and the present expenditure of the schools concerned.

On the basis of these estimates, the planners calculate the additional running costs generated by the project as a whole and examine, in the light of the national financial prospects (section II, B5) whether these additional costs can be borne. If they cannot, the project must be revised downwards.

B11 Remaining tasks of preparation

When the project document is prepared, the task of preparation is usually not finished. Firstly, several problems pending may not have been solved. Secondly, there remains what we have called the detailed formulation of the project: preliminary architectural projects, preparation of detailed lists of equipment, tenders, the promulgation of certain laws or regulations, etc.

As at the end of the identification stage, the planners have to submit to the national authorities, and where applicable to the funding organizations, those problems which are still pending and those tasks which remain to be performed. It is useful to prepare, in conjunction with the authorities, an estimated timetable of this work of various kinds. In this connection, see section II.

C. EXAMPLES

The reader is referred to the general remarks concerning the examples contained in this Guide.

The following examples are given below:

1. Contents of a preparation document for an education project (IIEP/Unesco Division of Financing of Education).

2. Forms to be completed for the annexes of a preparation document (IIEP/Unesco Division of Financing of Education).

3. Architectural standards for school buildings (IIEP).

4. Extract from an education project document concerning the construction of two new teacher training establishments.

5. Extract from an education project document concerning the location and accommodation schedule of a school to be renovated.

6. Contents of a project brief taken from the official Guidelines of UNDP.

TABLE 1: PREPARING PROJECTS

MAIN ITEMS TO BE CONSIDERED AND DISTRIBUTION OF TASKS

Main Items (Texts to be written)		Annexes		(Responsibilities)
1.	Justification			
1.1.	Current situation of the field considered			ED*(ECO)
1.2.	Government policy			ED
1.3.	Problems and needs			ED (ECO)
2.	Objectives			
2.1.	Statement of objectives			ED
2.2.	Overall design of the project			ED
2.3.	Results expected at the end of the project			ED
3.	Essential characteristics			
3.1.	Organization			
3.2.	Enrollment (or production)	3.21.	Enrollment distribution	ED
3.3.	Curriculum (or activities)	3.31.	Weekly timetable by premises	ED
3.4.	Methods			ED
3.5.	Location			ED & ARC
3.6.	Staff	3.61.	Teaching Staff	ED (ECO)
		3.62.	Non-teaching staff	
3.7.	Others			
4.	Items to be funded and costs			
4.1.	Construction	4.11.	Teaching load and space required	ED (ARC)
		4.12.	Schedule of accommodation, area and costs	ARC (ED)
		4.13.	Characteristics of the premises and space standards	ARC
4.2.	Furniture, equipment, materials	4.21.	List of furniture	ARC (ED)
		4.22.	List of equipment	ED (ARC)
4.3.	Technical assistance	4.31.	Technical assistance	ED
4.4.	Staff training	4.41.	Training	ED
4.5.	Others			
4.6.	Summary of costs to be financed	4.61.	Summary table of capital costs	
5.	Administration of the project			
5.1.	Organization and procedures			ARC
5.2.	Monitoring and evaluation			
5.3.	Implementation schedule	5.31.	Implementation schedule	ARC (ED)
6.	Feasibility			
6.1.	Administrative feasibility			ED (ECO, ARC)
6.2.	Financial feasibility	6.21	Annual operating costs to be paid by the Government	ECO (ED)

* ED = Education specialist or planner. ECO = Economist. ARC = Architect. Brackets indicate partial responsibility.

Source: Education project identification, preparation and evaluation unit. IIEP educational materials prepared in conjunction with Unesco Division of Financing of Education 1986.

EXAMPLE No. 2

FORMS FOR ANNEX TABLES

Annex 3.21
PROJECT
ENROLMENT DISTRIBUTION

Code number and name of institution	Number of grades	ENROLMENTS													Number of shifts	Number of classes	Annual number of leavers		
		Existing	New	Total by speciality										TOTAL	Total of females	Total of boarders			

Annex 3.31

PROJECT

CURRICULUM: WEEKLY TIMETABLE BY TYPE OF PREMISES

Subjects	Number of weekly periods			Number of weekly periods by type of accomodation															
				Classrooms			Laboratories			Workshops									
	Grades			Grades			Grades			Grades			Grades			Grades		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
TOTAL																		

Note : If there are several specialities a separate table is needed for each of them.

Annex 3.61

Project _____

Teaching Staff and Salary Costs

Number and Institution /Subject Matter	Nr. Teaching Hours	Nr. Teachers by Category	Annual Salary Cost		Present Staff and Salaries	
		Total	Per Teacher	Total	Number	Total Salaries
1.						
.....						
.....						
.....						
.....						
.....						
Total						
2.						
.....						
.....						
.....						
.....						
.....						
Total						
3.						
.....						
.....						
.....						
.....						
Total						
4.						
.....						
.....						
.....						
.....						
Total						

Annex 3.62

Project _____

Non-teaching Staff and Salary Costs

Number and Institution /Functions	Nr. Staff by Category	Annual Salary Cost		Present Staff and Salaries	
	Total	per Employee	Total	Number	Total Salaries
1.					
.....					
.....					
.....					
.....					
.....					
Total					
2.					
.....					
.....					
.....					
.....					
.....					
Total					
3.					
.....					
.....					
.....					
.....					
.....					
Total					
4.					
.....					
.....					
.....					
.....					
.....					
Total					

Annex 4.11

PROJECT

TEACHING LOAD AND ACCOMMODATION REQUIRED

Code number and institutions 1/	Classroom				Laboratories				Workshops				.....				.....			
Number of periods	Grade				Grade				Grade				Grade				Grade			
Accommodation	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total	1	2	3	Total
... Number of classes Number of periods Number of accommodation units Use factor																				
... Number of classes Number of periods Number of accommodation units Use factor																				
... Number of classes Number of periods Number of accommodation units Use factor																				
... Number of classes Number of periods Number of accommodation units Use factor																				
... Number of classes Number of periods Number of accommodation units Use factor																				
... Number of classes Number of periods Number of accommodation units Use factor																				

1/ Group institutions with similar enrolment distributions.

Annex 4.12

PROJECT

SCHEDULE OF ACCOMMODATION, AREAS AND COSTS 1/

Code number and name of institution: ..... Number of students: ..... Boarders: .....

Schedule of accommodations	Number of students per unit	Number of units	Net areas (m^2)		Costs (Fr. .....)2/			
					Construction		Furniture	Equipment
			per stud.	Total	per m^2	Total		
I. Teaching and common services								
a. New construction:								
Classrooms								
Laboratories								
Workshops								
.....								
.....								
.....								
.....								
b. Rehabilitation:								
(% cost of new construction)								
Buildings ..... (%)								
.....								
.....								
.....								
Buildings..... (%)								
.....								
.....								
.....								
II. Boarding								
a. New construction:								
Dormitories								
.....								
.....								
.....								
b. Rehabilitation:								
(% cost of new construction)								
Buildings..... (%)								
.....								
.....								
Buildings..... (%)								
.....								
.....								
.....								
TOTAL								

Note: 1/ Prepare one Annex per institution concerned.

2/ Currency unit.

TOTALS	Gross total	Distance factor	Net total
Construction Site development 10% Professional fees Furniture Equipment			
Total			

Annex 4.13

STANDARDIZED AREAS AND CHARACTERISTICS OF ACCOMMODATION

Code and name of school:

Total number of pupils: boys / girls

Type of accommodation	N° of pupils per unit	Area per pupil	Area per accomm-odation (sq. m.)	Description
Teaching and general facilities				
Classroom				
Multi-purpose laboratory				
Science preparation and storage room				
Physics preparation and storage room				
Domestic science workshop				
Sewing & dressmaking				

Annex 4.21

Project _____

LIST OF FURNITURE

(Currency unit: .....)

DESIGNATION	NUMBER	UNIT COST	TOTAL COST

Notes :

Annex 4.22

Project _____

LIST OF EQUIPMENT

(Currency unit: .....)

DESIGNATION	NUMBER	UNIT COST	TOTAL COST

Notes :

Annex 4.31

Project .....

TECHNICAL ASSISTANCE

(Currency unit: .....)

Specialty and type of expenditure	Number	Duration	COSTS	
			Base costs	Total Costs
1. National consultants and experts				
2. Foreign consultants and experts				
TOTAL				

Annex 4.41

Project .....

TRAINING EXPENDITURES

(Currency unit: .....)

Type of training and type of expenditure	Places	Number of Participants	Duration	COSTS	
				Base costs	Total costs
1. Local					
2. Abroad					
TOTAL					

Annex 4.61

SUMMARY OF CAPITAL COSTS

Project Items	Total costs per project item (.....) 1/									
	Construction	Site development	Professional fees	Furniture	Equipment and raw materials	Foreign tech. assistance and scholarships	Local consultants and training	Total 1-7	%	Recurrent costs
	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4										
5										
6										
7										
8										
9										
Sub-Total										
Contingencies 10%										
Total base costs										
Price increase										
Grand Total										

1/ Currency unit.

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Annex 5.31

IMPLEMENTATION SCHEDULE

ACTIVITIES \ YEARS	19				19				19				19				19				19			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	

Annex 6.21

PROJECT

ANNUAL RECURRENT COSTS TO BE PAID BY GOVERNMENT FOR FULLY DEVELOPED PROJECT

(in ..... 1/ at ..... 2/ prices)

CATEGORY OF EXPENDITURES	PRESENT EXPENDITURES	END OF PROJECT EXPENDITURES	ADDITIONAL EXPENDITURES
1. Teaching staff 2. Non-teaching staff 3. Equipment 4. Operation of vehicles & other equipment 5. Maintenance of buildings /furniture 3/ 6. Maintenance of equipment 4/ 7. Per diem allowances 8. Services and others 9. Sub-total (1 to 8)			
10. Food, boarding 11. Bursaries, scholarships 12. Sub-total (10 and 11)			
13. Grand Total (9 and 12)			

1/ Currency unit.

2/ Year of reference.

3/ 2% of total building and furniture costs.

4/ 5% of total equipment costs.

EXAMPLE No. 3

ARCHITECTURAL STANDARDS FOR EDUCATIONAL BUILDINGS

Classrooms	1.4-1.5 m²/student
Demonstration laboratories	1.6-1.8 m²/student
Laboratories	2.2-2.5 m²/student
Workshops	3.4-8 m²/student
Administration	0.25 m²/student
Library	0.025 m²/book (0.01 for shelves, 0.01 reading room, 0.005 for other purposes)
Toilets	0.15 m²
Covered area	0.25 m²/student (may include snack-bar)
Storage	0.2 m²/student
Student hall	0.3 m²/student
Dormitories	6 m²/student
Dining hall	1.4 m²/student (cafeteria + kitchen)
Staff housing	
Principal	120 m²
Other staff	80 m²
Total site area:	
Day school	20 m²/student minimum
Boarding school	35 m²/student minimum

EXAMPLE No. 4

CHAPTER V

REPUBLIC OF MALI

THIRD EDUCATION PROJECT

Extracts from the project preparation document prepared by a working group of the Malian Ministry of National Education, assisted by the Unesco Division of Financing of Education.

RECAPITULATIVE TABLE OF PROJECT COSTS

Components and sub-components	Total cost per sector (in thousands of Mali francs)											
	Buildings	Site development	Furniture	Equipment	Raw materials	Local training	Tech. assist. & scholarships abroad	operating expenditure	Project Bureau	Total cost 1 to 9	Thousands of US $	%
	1	2	3	4	5	6	7	8	9	10		
1 - BASIC EDUCATION	1.669.912	587.522	237.259	1.068.665	86.339	353.045	202.861	180.104		4.391.707	7.702	41.2
1.1 Ruralization of basic education	-	-	24.500	329.400	-	76.896	42.904	82.604		556.304	976	
1.2. Introduction national lang.												
(a) Bambara				26.672	17.777	57.760	-	14.000		116.209		
(b) Others					31.140	39.600	-	6.000		76.740		
Sub-total C1.2 (a + b)				26.672	48.917	97.360	-	20.000		192.949	338	
1.3 Science and technology units	21.600	32.160	3.000	59.000	-	37.789	95.850	-		249.399	438	
1.4 IPEG												
(a) Kangaba	803.886	272.399	151.435	116.590	18.295	-	-	-				
(b) Niono	840.426	282.963	158.319	121.889	19.127	-	-	-				
Sub-total C1.4 (a + b)	1.644.312	555.362	309.754	238.479	37.422	-	-	-		2.830.916	4.966	
1.5 to 1.7 Literacy and youth training				415.114	-	181.000	18.520	37.500		612.134	1.074	
2 - TRAINING IN FARMING AND ANIMAL HUSBANDRY	1.624.007	241.856	122.910	245.802	-	30.700	863.800	511.850		3.640.180	6.386	22.8
2.1 Improving the EIV in Sotuba	324.526	31.652	27.750	88.230	-	30.700	527.400	211.450		1.241.710	2.178	
2.2 Training agricultural extension workers 1/	1.299.494	210.204	95.160	157.172	-	-	336.400	300.000		2.398.430	4.208	
3 - INSTITUTIONAL DEVELOPMENT	336.365	40.795	18.848	180.763	-	41.546	231.481	195.380		1.044.798	1.821	12.2
3.1 Div. of Tech. Ed.	111.195	10.535	11.000	37.830	-	-	158.760	25.380		354.700	622	
3.2 DNPES	225.190	30.260	7.848	142.933	-	41.546	172.721	120.000		740.098	1.299	
4 - STRENGTHENING ECICA and CFP	352.625	31.913	11.000	340.100	17.500	-	-	-		753.138	1.321	7.0
(a) ECICA	279.545	19.605	10.000	198.100	10.000	-	-	-		517.250		
(b) CFP	73.080	12.308	1.000	142.000	7.500	-	-	-		235.888		
5 - EDUCATIONAL PROJECTS BUREAU									825.832	825.232	1.448	7.7
Sub-total	3.978.944	902.086	489.612	1.834.930	103.839	425.291	1.298.142	796.934	825.832	10.755.010	18.868	100
Contingencies 10 %	397.894	90.209	48.961	183.493	10.384	42.529	139.814	79.693	82.523	1.075.501	1.887	
Total basic costs	4.376.838	992.295	538.573	2.018.423	114.223	467.820	1.537.956	876.627	907.755	11.830.511	20.755	
Price increases	2.451.029	555.605	236.971	888.106	45.609	210.519	415.248	771.431	599.412	5.974.090	10.481	
Grand total in Mali Frs.	6.827.867	1.547.900	775.544	2.906.529	159.912	678.339	1.953.204	1.648.058	1.507.167	17.804.601	31.236	
in thousands of U.S. $ (1 U.S. $ = 570 FM)	11.980	2.716	1.361	5.099	280	1.190	3.427	2.891	2.893	31.236		
% in foreign currency	70	75	80	100	80	80	100	80	85	81.5		
in thousands of U.S. $	8.386	2.037	1.088	5.099	224	952	3.427	2.313	1.949	25.475		

1/ Expenditures in items 7 and 8 are for all schools, items 1 to 4 are solely for the CAA/CS in Pessoba

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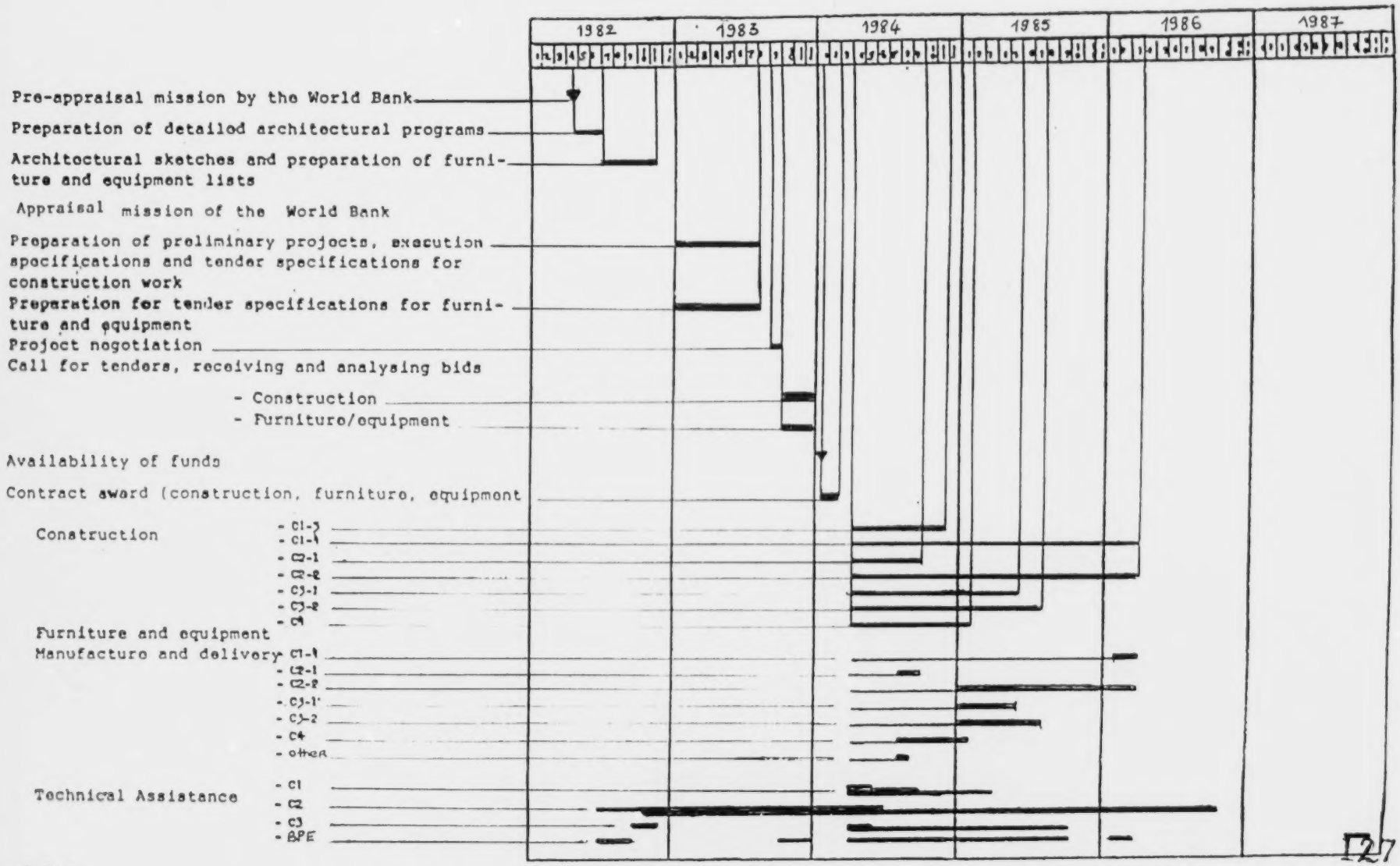
FURTHER STEPS IN THE PROJECT



ADDITIONAL ANNUAL RECURRENT EXPENDITURES OCCASIONED BY THE PROJECT IN FULL SWING TO BE PAID BY THE GOVERNMENT

(in thousands of Mali francs)

Component	Expenditure for Personnel	Other recurrent expenditures	(including scholarships)	Total
1. Basic Training				
1.1. Ruralization of basic education	-	-	-	-
1.2. Introduction of national languages	-	-	-	-
1.3. Science and technology units	21.600	17.800	-	39.400
1.4. IPEGs:				
(a) Schools	103.782	234.068	(174.000)	337.850
(b) Employment of graduates as teachers	200.000	20.000	-	220.000
1.5. to 1.7. Literacy training	-	-	-	-
2. Training in Farming and Animal Husbandry				
2.1. EIV in Sotuba	9.440	44.500	-	53.940
2.2. Training agricultural extension workers	5.654	102.392	(34.900)	108.046
3. Institutional Development				
3.1. Technical Training Division	13.992	8.460	-	22.452
3.2. DNPES	6.400	24.000	-	30.400
4. Strengthening ECICA-CFP	9.000	3.600	-	12.600
TOTAL	369.868	454.820	(208.900)	824.688

Basis of calculation: 1.4.b: Expenditure for staff: 57,735 M.Fr/month x 12 months x 288 graduate teachers/year (source: MEN/CAF)
Other expenditures: estimated to run 10% of personnel costs.
For the other sub-components, refer to the Section on recurrent costs in the appropriate working document.

SUB-COMPONENT 1.4

CONSTRUCTION OF TWO IPEG'S (TEACHER TRAINING COLLEGES) IN KANGABA AND NIONO

Responsible Authorities: - Ministry of Education

- National Pedagogical Institute

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A. JUSTIFICATIONS AND BACKGROUND

1. As part of its policy for regionalization, the Mali Government wishes to give each region a General Education Pedagogical Institute (abbreviated as IPEG, meaning a Teacher Training College). Decree No. 430/MEN-JS-IPN-EN dealing with the status of these IPEGs stipulated in Article 3: "Theoretically, one IPEG is planned for each region". At the present time, there are IPEGs operating in:

a) Kayes, in the first region
b) Bamako, for the Bamako district
c) Sikasso, for the third region
d) Diré, for the sixth region

This project aims to set up:

a) One IPEG in Kangaba for the second region
b) One IPEG at Niono for the fourth region.

2. Once these two projects have been completed, similar institutions will still have to be provided for the fifth region in Mopti and the seventh region in Gao, in accordance with long-term plans (see Annex 1 herein, a map by regions).

3. Furthermore, the Government is obligated to increase the enrolment rate in basic education, which is creating a top-priority problem because of the swift growth rate of the population and the low enrolment rate at the present time. The Ministry of Education would like to reach a growth rate for enrolment in the basic school system of 5 % per year, starting in 1980 (at which time the overall enrolment figure for primary schooling was 298,831 pupils). In 1995, the school population would thus rise to 621,248 pupils. On the basis of a teacher/pupil ratio of 1 to 42, there would be a need for 7,844 teachers in 1982 and 14,791 in 1995. Assuming 5 % of the teachers leave the profession each year, the number of teachers required between 1985 and 1995 will rise by 1,140 per year whereas the number of graduates of the four existing IPEGs will be only 785 per year (table 1 herein). When they are joined in 1987 by the graduates of the two new schools (Kangaba and Niono), the number of teachers graduating annually will be 1,073 (785 + 288).

4. Once the two IPEGs proposed in this Project have been set up, the total teacher shortage will thus drop from 4,598 teachers (the accumulated deficit) to 2,314 teachers between 1982 and 1994 (see table 1 herein).

Table 3

PROJECTED NEEDS FOR TEACHERS IN BASIC EDUCATION
1981/82 - 1994/95

School year	Enrolment	Teachers needed	Number of teachers	Pupil/ teacher ratio	Additional teachers required for following year	Teacher wastage (3) x 5% or (4) x 5%	Total needs (5)+ (6)	New graduates from 4 existing IPEGs	Surplus or deficit in teacher /year (7) - (8)	New IPEG graduates (4 existing + 2 new IPEGs	Surplus or deficit in teachers/ year (6 IPEG) (7) - (10)	Cumulative deficit of 4 IPEGs	Cumulative deficit of the 6 IPEGs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1975/76	252.393		6.213	40/1									
1976/77	261.842		6.530	40/1									
1977/78	280.330		6.540	42/1									
1978/79	292.245		6.877	42/1									
1979/80	298.831*		6.062	49/1									
1980/81	290.696**		6.862	42/1	982	343	1.325	371	- 954				
1981/82	329.461***	7.844		42/1	392	392	784	750	- 34			- 988	- 988
1982/83	345.934	8.236		42/1	492	411	823	847	+ 24			- 964	- 964
1983/84	365.230	8.648		42/1	432	432	864	785	- 79			- 1.043	- 1.043
1984/85	381.392	9.080		42/1	454	454	908	785	- 124			- 1.167	- 1.167
1985/86	400.462	9.534		42/1	477	476	953	785***	- 178			- 1.345	- 1.345
1986/87	420.485	10.011		42/1	501	500	1.001	785	- 216	1.073	+ 72	+ 1.561	- 1.273
1987/88	441.509	10.512		42/1	525	525	1.050	785	- 265	1.073	+ 23	- 1.826	- 1.250
1988/89	465.584	11.037		42/1	552	551	1.103	785	- 318	1.073	- 30	- 2.144	- 1.280
1989/90	486.764	11.589		42/1	580	579	1.159	785	- 364	1.073	- 86	- 2.508	- 1.366
1990/91	511.102	12.169		42/1	606	608	1.214	785	- 429	1.073	- 141	- 2.937	- 1.507
1991/92	536.657	12.777		42/1	639	638	1.277	785	- 492	1.073	- 204	- 3.429	- 1.711
1992/93	565.490	13.416		42/1	671	670	1.341	785	- 556	1.073	- 268	- 3.985	- 1.979
1993/94	591.664	14.087		42/1	704	704	1.408	785	- 613	1.073	- 335	- 4.598	- 2.314
1994/95	621.248	14.791		42/1									
Average over 1984/1985 - 1993/1994 Source : Annex 6							1.140	785	- 355	1.073	- 67		

* Estimated growth rate of 5% per year in 1980.

** For various reasons, the figures in 1980/81 are exceptionnally low.

*** After 1982 : number of teachers = Number of pupils + 42 (pupil: teacher ratio)

**** It is assumed that the number of graduates of the four existing IPEGs will remain the same.

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Ruralization and the Quality of Education

5. Curricula in the IPEGs stress ruralization. Consequently, these Teacher Training Colleges should train teachers ready to work in the rural basic schools. The IPEGs should therefore be located as soon as possible in the countryside. The Mali Government is offering 200 hectares of land to each IPEG.

6. Pupil-teachers living in rural areas and in contact with the population will become better acquainted with the reality of peasant life. With their knowledge of the local language, they will be able to participate in literacy campaigns and hence will be better able to bring about the changes expected of them.

7. Moreover, in the four current IPEGs, enrolment figures per class are too high, running from 60 to 70 pupil teachers each. The threshold of saturation bas been exceeded. One purpose of setting up two new IPEGs is to reduce enrolment in the others.

B. OBJECTIVES OF THE PROJECT

8. This sub-component hence aims to set up two IPEGs located in rural areas in order to:

a) increase the number of teachers trained: the two IPEGs in Kangaba and Niono will provide 288 additional teachers for the first cycle of Basic Education starting in October 1987 (see Chapter IV).

b) improve training: the new techniques and resources used in these IPEGs are designed to allow for an improvement in the quality of education so that it is responsive to the demands of the environment. Thus, these schools will constitute laboratories for undertaking experimental studies of new methods for water supply, small locally-built dams, well drilling, irrigation and many other experiments which may be popularized at the village level. Once the curricula have been redesigned and workshops better equipped, the pupil-teachers will receive enriched training.

C. LOCATION OF THE TWO IPEGs: KANGABA AND NIONO

9. (1) Kangaba: Kangaba is a favourable site for several reasons: it is located near water (the area is easily flooded during the high water season), land (200 ha.) is available and there is nearby staff from several rural development schemes (ODR) including the Upper Valley operation which will give pupil-teachers an opportunity to see tried and tested techniques at work.

(2) Niono: Niono was chosen as the location for the IPEG in the fourth region. Situated in the center of the "Niger Development Agency" scheme in the middle of the Sahel, it is a town of vital importance for Mali's economy. The staff and installations of the

Niger Development Agency will provide technical and practical input, as will the activity of the Sahel breeding station and the Agricultural Training Centre in Niono.

10. In both Niono and Kangaba, it will be easy to organize practical training sessions for pupil-teachers in practice schools. After all, there are about 90 lower Basic Education classes in the Niono area and 74 near Kangaba for an enrolment of 144 pupil-teachers in the second year of each of these two institutions.

D. PEDAGOGICAL ASPECTS

11. Enrolment in each school

- in the 1st grade: 216 pupil-teachers
  in the 2nd grade: 144 pupil-teachers
  for a total of: 360 pupil-teachers, all of them boarders, two-thirds of whom will be boys and one-third girls. There will be five classes of 43 students in the first grade and three classes in the second grade. Every year, the two IPEGs will train 144 x 2 = 288 qualified graduates. It is necessary to admit 216 pupil-teachers in the first grade because they must take an examination before moving into the second grade, and this examination eliminated an average of some 15 to 18 % of total enrolment through a selection process and also causes a repeater rate estimated to run some 12 to 15 %.

12. New Teacher Profile: The 288 graduates of these IPEGs take an examination at the end of their course of study, with written and oral tests dealing solely with their vocational training. They will be granted a diploma upon graduation from the IPEGs specifying that they are "Teachers in lower Basic Education."

13. The pupil-teachers living in the rural areas in contact with the local population will become more aware of actual living conditions in the countryside and thereby better able to help the population benefit from the desirable improvements. In addition, they will be more willing to serve in rural areas.

14. Curricula: The teachers will be trained to become familiar with the reality of rural life in the fields of agriculture, animal breeding and handicrafts. As soon as they graduate from the IPEGs, they will find themselves deeply involved in combatting drought, working to maintain the soil, protect the soil by planting appropriate trees, enriching the soil by using organic fertilizers, and so on, for the purpose of defending the natural environment, protecting nature and reclaiming arid land. The new techniques used in these IPEGs will enable the teachers after graduation to contribute to creating a new rural environment, with new jobs, an increase in production and productivity, and improvement in hygiene, and a rejuvenation of the ethnographic heritage.

15. A technical Commission set up by the Minister of Education at the proposal of the Director General of the National Pedagogical Institute, and including the Inspectors General of the general secondary school system, the Inspectors of the basic education system, and teachers working in the IPEGs, is in charge of continuous effort to make curricula more relevant to the new situation.

16. Timetables: Each IPEG will apply curricula in technology, agriculture, and civic and moral instruction integrated into the curricula for general academic and vocational training subjects.

WEEKLY TIMETABLE

Subjects	1st grade	2nd grade
- Psychology	2 h	3 h
- General pedagogy		4 h
- Special pedagogy		8 h
- Professional ethics		1 h
- Law		1 h
- French	8 h	5 h
- History - geography	3 h	
- Mathematics	6 h	2 h
- Biological sciences	3 h	
- Physical sciences	2 h	
- Welfare and Civic instruction	1 h	1 h
- Home economics	4 h	4 h
- Practical work in agriculture	3 h	3 h
- Technology	4 h	4 h
- Drawing	1 h	1 h
- Music	1 h	1 h
- Physical education	1 h	1 h
- National language	1 h	1 h
T o t a l	40 h	40 h

17. Each IPEG will also undertake research work on rural life by means of projects bringing together the IPEG staff, cadres from the ODRs and volunteers from peasant circles.

E. STAFF

18. Teaching Staff: Each school will require the following staff: (Annex 5 herein)

	Total teaching load/week	Number of teachers
- Psycho-pedagogy	61 h	4 teachers
- Humanities	55 h	3 "
- National languages	8 h	1 "
- Mathematics	36 h	2 "
- History-geography	15 h	1 "
- Biological sciences	15 h	1 "
- Physical sciences	10 h	1 "
- Home economics	32 h	2 "
- Agriculture	32 h	2 "
- Technology:		
. leatherwork	32 h	1 foreman
. weaving	32 h	1 "
. carpentry	32 h	1 "
. blacksmithing	32 h	1 "
. wood-carving	32 h	1 "
. bricklaying	31 h	1 "
- Drawing	8 h	1 "
- Music	8 h	1 teacher
- Physical education	8 h	1 "
	Total	26

19. The training of teachers hired: All the teachers in humanities, psycho-pedagogy, sciences, mathematics, history and geography will be themselves graduates of the higher Teacher Training College.

20. The agriculture teacher should be a graduate of the IPR institute in Katibougou. Officials in charge of technology disciplines should be hired from amongst the graduates of the National Art Institute (from music, drawing, and handicrafts), from the Vocational Training Center or the Central School for Industry, Trade and Administration (abbreviated as ECICA).

21. Non-teaching staff: The administrative staff includes:

a) The Director General: He is chairman of the Faculty Council, the Discipline Board and the Class Council. He is in charge of links between the school and the administrative authorities, school leaders and parents. He coordinates the activities of the faculty and other staff groups. He manages the school budget, and signs all contracts and bills. He accepts the delivery of school supplies and the construction work for which he signed the contracts.

b) The Director of Studies: He is in charge of teaching activities in the school. He serves as the Director General ad interim when the latter is absent or sick. He also teaches in his own specialty.

c) The Advisor for Directed Activities: He is in charge of programming and implementing cultural activities and sports and supervising the social program.

d) The Chief Proctor: He is in charge of discipline and school cleanliness and sees to it that in-house rules are applied.

e) The Bursar: He is responsible for the functions set forth by law:

- Administrative employee - the school director can ask him to manage part of the staff (cooks, day laborers, etc.);

- Finance manager for income and expenditures - the bursar must ensure respect of financial rules and check that the books are well kept. He reports to the school director who is entitled to ask him for accounts at any time. The bursar should thus serve as a technical advisor for the school director in this respect.

f) The Accountant: The bursar may be assisted by an accountant serving as his deputy and main aid, as well as by a clerk and store-room book-keeper.

g) Furthermore, the staff should include the following people:

- 1 administrative assistant doubling as typist
- 1 orderly
- 1 chief cook
- 2 cooks
- 5 cook's helpers
- 2 meal grinders
- 4 workmen for boarding facilities
- 4 workmen for day school
- 2 night watchmen
- 1 registered nurse
- 1 lower school nurse
- 2 nurse helps

F. BUILDINGS AND FURNITURE

22. The IPEGs: Of the 2 sites chosen for the 2 new IPEGs, each of about 200 ha, only the plot of land in Kangaba has already been assigned and marked off. The paperwork has been started to get the Niono site assigned also but that has not yet been done officially. Since the land in Kangaba and Niono are not yet connected up to the electricity network, a power generator should be located in each IPEG. There are streams flowing near each of the two IPEG sites, so pumps should be installed to connect them to the water tanks.

23. Each IPEG will have 7 classrooms, 6 technology workshops, 1 home economics room, a laboratory and a farm (Annex 2 herein) for teaching purpose. The utilization rate of these premises is realatively high, running about 80 %.

24. In addition, the existing infrastructure will be used when it has been emptied out by local villagers, especially young people. The workshops will be used for the older basic school pupils, while the classrooms will accommodate further training courses and may serve as the venue for meetings devoted to problems in agriculture, thereby linking up the school with life in the village.

25. Annex 3.1 and 3.2 herein will provide details of the costs and characteristics of these premises.

26. The buildings will be erected using techniques which limit the use of imported materials (stabilised earth). The Educational Projects Bureau, which has already been in charge of the construction of several rural schools on forced account, will serve as contractor for this work. This approach will hopefully allow for a saving of about 50 % of building costs compared to a conventional private contractor approach.

27. Some of the equipment will be procured using a call for tenders within the country. The remainder of the equipment will be covered by an international call for tenders.

SUMMARY OF IPED FURNITURE AND CONSTRUCTION COSTS
(in thousands of Mali francs)

	Kangaba	Niono	Total
Construction			
Priority premises	716.230	748.786	
Teacher housing	87.656	91.640	
Total Construction	803.886	840.426	1.644.312
Site development-priority premises	254.869	264.635	
Site development housing	17.530	18.328	
Total site development	272.399	282.963	555.362
Furniture - Priority premises	144.835	151.419	
Furniture - Teacher housing	6.600	6.900	
Total Furniture	151.435	158.319	309.754

28. In addition to the teaching rooms and boarding facilities, the priority premises include only three housing units for the administration. (An effort should be made to find housing for teachers in the nearby towns of Kangaba and Niono, located about 300 meters from the IPEG sites). To house the teachers, it would be necessary to build 10 units of 50 m2 each. Furniture will be bought on the national market (manufactured in the workshops of the ECICA school and CFP center).

29. Basic school premises accommodating the graduates of the IPEGs: As is customary in basic education in Mali, the classrooms where the graduates of the IPEGs will work will be paid for by the Parent Associations. There are two possibilities for the procedure by which they may be built:

a) The polulation may express the need for a school by sending a request to the Minister of Education. After the Director for Basic Education has made an investigation, the Minister may give his approval;

b) The Inspector for Education in that locality may request that a school be built. This request is processed by the Directorate for Basic Education and sent to the Minister of Education for his opinion.

30. Thereafter, the parents associations are in charge of paying for materials and most of the cost of construction.

31. The Minister's approval will allow the school to receive the teachers required for it to operate.

32. Practice teaching schools: Whatever additional building work may be required in the two basic schools in Kangaba and Niono where practice teaching will occur for IPEG students will be studied by the engineering office of the Educational Projects Bureau and then paid for by the Parents Associations and supervised by the Projects Bureau during the actual construction work, which may use the occasion of these two IPEG job sites to train skilled workers.

G. EQUIPMENT AND SUPPLIES

33. The project will supply equipment for the administration, the library, the workshops, the laboratory and the farm at a total cost as follows:

-for Kangaba	:	116,590,000 MFr.
-for Niono	:	121,889,000 MFr.
T o t a l	:	238,479,000 MFr.

34. Each IPEG will be supplied with two tractors for farm work. The IPEGs in Sikasso and Diré already have tractors which have paid for themselves (by being rented out at the rate of 17,500 MFrs/ha).

35. In addition, plans call for a 4-year supply of raw materials needed for the workshops, except for bricklaying as it is impossible to store cement. The cost for that is as follows: 18,295,000 MFr for Kangaba, and 19,127,000 MFr for Niono, meaning a total of 37,322,000 MFr (see Annex 4 for the detailed lists).

H. FACT-FINDING MISSIONS AND TECHNICAL ASSISTANCE

36. Trip to Guinea: Three Mali national officials and eight Teacher Training College Directors will travel to Guinea in order to become familiar with and evaluate the experience Guinea has had in ruralizing education.

37. Trip to Tanzania and Cuba For the same purpose, three national officials will visit these two countries.

38. Travel costs will amount to: 15,662,100 MFr, divided up as follows:

- 11 people to Guinea (14 days) per diem allowance: 11 x 14 x 35,000 MFr.	5,390,000 MFr
Round-trip ticket: 14 x 130,750	1,970,500 MFr
	7,360,500 MFr
- 3 people to Cuba (14 days) per diem allowance:	1,470,000 MFr
Round-trip ticket: 3 x 969,950 MFr	2,909,850 MFr
- 3 people to Tanzania (14 days) per diem allowance: 3 x 4 x 35,000 MFr	1,470,000 MFr
Round-trip ticket: 3 x 817,250 MFr	2,451,750 MFr

39. Technical Assistance The plan is to receive the assistance of one consultant for six months (from October 1984 to March 1985) to help the Technical Commission develop curricula for the IPEGs integrating practical work with academic disciplines. This consultant should be very familiar with experience in basic education in other countries (see Annex 7).

- 1 consultant x 6 months (at 59,850,000 MFr/year	29,925,000 MFr

I. SUMMARY OF THE COSTS OF THE PROJECT

	Kangaba	Niono	Total
1. Construction	1,076,285	1,123,389	2,199,674
2. Furniture	151,435	158,319	309,754
3. Equipment	116,590	121,889	238,479
4. Raw materials	18,295	19,127	37,422
5. Technical Assistance			45,587
6. Scholarships			
T o t a l (MFr)			2,830,916

J. RECURRENT COSTS OCCASIONED BY THE PROJECT AND PAID FOR BY THE GOVERNMENT

40. Table 2 below presents the recurrent costs occasioned by the establishment of two new IPEGs.

TABLE 2

ANNUAL OPERATING COSTS FOR A IPEG IN FULL SWING PAID FOR BY THE GOVERNMENT

(in thousands of MFr - Prices as of Jan. 1982)

Type of expenditure	Cost I IPEG
1. Teaching staff	28,697
2. Non-teaching staff	23,194
3. Equipment	7,700
4. Operating vehicles or other equipment	6,240
5. Maintenance Buildings/furniture	25,094
6. Maintenance equipment	6,000
7. Perdiem allowance	-
8. Services, miscellaneous	-
9. Sub-Total (1 to 8)	96,925
10. Food, boarding (200,000 MFr x 360)	72,000
11. Scholarships	
12. Sub-total (10 to 11)	72,000
13. Grand Total (9 + 12)	168,925

Total for 2 IPEGs: 168,925 x 2 = 337,850 Thousands of MFrs

Basis of the Calculations

1 and 2 : Annex 5

3 : 3 million Mali francs for supplies + 4.7 million for raw materials (see Annex 5) (a 4-year stock so sukpplies provided by the Project).

4 : 30,000 km x 15/100 Km x 520 MFr + 30,000 km x 25/100 km x 520 = 2,340 thousands of MFr + 3,900 thousands of MFr = 6,240 thousands of MFr.

5 : 2 % of total costs for buildings and furniture starting with the third year (average for the two schools)

6 : 5 % of he total cost for equipment

8 : IPEGs do not pay for telephone and electricity expenses directly.

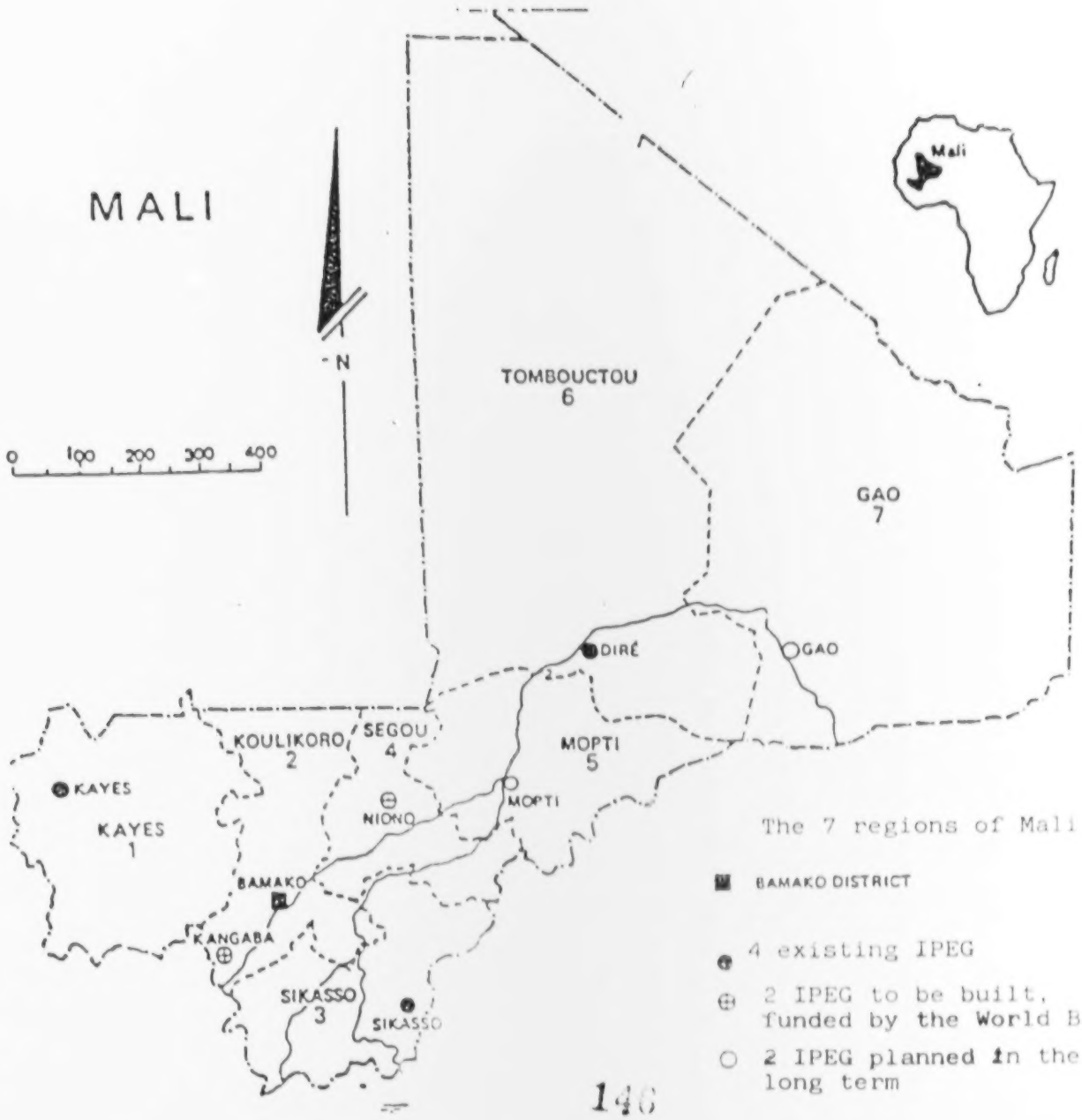
41. Implementation Schedule Refer to table 3 herein.

Table 3

IMPLEMENTATION SCHEDULE: CONSTRUCTION OF IEGs AT KANGABA AND NIONO

Component	1982 1 2 3 4	1983 1 2 3 4	1984 1 2 3 4	1985 1 2 3 4	1986 1 2 3 4	1987 1 2 3 4
Pre-projects, tenders Construction						
School admissions and beginning of courses						
Teacher recruitment and further in service training						
Detailed curricula development						
First graduation						
Equipment and furniture (manufacturing)						
Technical Assistance (1 consultant for 6 mths)						
Fact-finding mission/3 people (trips to Tanzania and Cuba)						

Annex 1


MALI
N
0 100 200 300 400
Mali
TOMBOUCTOU
6
GAO
7
DIRÉ
GAO
KOULIKORO
2
SEGOU
4
MOPTI
5
KAYES
KAYES
1
NIONO
MOPTI
BAMAKO
KANGABA
SIKASSO
3
SIKASSO
The 7 regions of Mali
BAMAKO DISTRICT
4 existing IPEG
2 IPEG to be built, funded by the World Bank
2 IPEG planned in the long term

Annex 2

IPEG - CURRICULUM, WEEKLY BREAKDOWN OF HOURS BY TYPE OF ACCOMMODATION

Subject matter	Number of weekly periods per subject and per grade		Total number of weekly periods per subject, grade and type of room																						Recreation room	
			Classrooms		Laboratory		workshops																			
			grade		grade		Bricklaying		Woodworking		Black-smithing		Wood carving		Weaving		Home economics		Sewing		Leather-work			
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Psychology	2	3	2	3																						
General pedagogy		4		4																						
Special pedagogy		8		8																						
Vocational Morals		1		1																						
Laws		1		1																						
French	8	5	8	5																						
History-geography	3		2		1																					
Mathematics	6	2	6	2																						
Biological Sciences	3				3																					
Physical Sciences	2				2																					
Welfare-Civil Instruction	1	1	1	1																						
National Languages	1	1	1	1																						
Home economics	4	4															2	2	2	2						
Technology	4	4					0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66					0,66	0,66				
Drawing	1	1	1	1																						
Music	1	1																							1	1
Physical Education	1	1																								
Agriculture(practical work)	3	3	1	1																						
Weekly total	40	40	23	29	6		0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66	2	2	2	2	0,66	0,66			1	1

Annex 3

IPEG - TOTAL TEACHING LOAD AND ACCOMMODATION REQUIRED

	Classrooms		Laboratory		For each workshop		Home economics	
	1st grade	2nd grade	1st grade	2nd grade	1st grade	2nd grade	1st grade	2nd grade
Number of sections/grade	5	3	5	3	5	3	5	3
Total number of periods/grade	115	87	30	0	3,3 x 6 groups = 19,8	2 x 6 groups = 12	10 x 2 groups = 20	6 x 2 groups = 12
Total number of periods/type of room	202		30		32		32	
Number of rooms (required units/type)	7		1		6 (1 workshop in each subject)		1 workshop	
Use factor	80 %		83 %		80 %		88 %	

Notes : 1/ In the first grade, there will be 5 sections of 48 pupil-teachers.

2/ In the second grade, there will be 3 sections of 48 pupil-teachers.

3/ The total number of boarders will be 360 in each IPEG.

4/ 2/3 are boys and 1/3 are girls.

5/ The use factor is calculated on the basis of 36 hours/week for classrooms laboratory, home economics and of 40 hours/week for workshops.

Annex 3.1

SCHEDULE OF ACCOMMODATION, AREA AND COSTS

IPEG - Yangaba
- Nieno

Enrollment: 360 boarding students — 240 boys, 120 girls

Type of accommodation	Number of pupils per Unit	No. of units	Net area m2 Unit	Net area m2 Total	Cost in thousands of Mfrs Construction. per m2	Construction. Total	Furniture	Equipment
Section I - Teaching and Common Services								
Classroom	48	7	72	504			15.260	
All purpose laboratory	48	1	146	146			1.264	
Home economics		1	164	164			2.583	
(kitchen shelter)	(24x2)	1	(24)	(24)	165	3.960		
Library		1	107	107			2.750	
Admin. Infirmary		1	236	236			8.000	
Student bathroom			30	30				
Walls and circulation	25 %			296				
				1.483	255	378.165		
Sub total						382.125	29.857	
Bricklaying shop	8	1	48	48				
Carpentry shop	8	1	48	48				
Wood-working shop	8	1	48	48				
Blacksmith shop	8	1	48	48			1.512	
Weaving shop	8	1	48	48				
Leatherwork shop	8	1	48	48				
Walls and circulation	10 %			29				
Sub total				317	180	57.060	1.512	
Farm	-	1	200	200				
Farm warehouse		1	200	200				
Garage		1	100	100				
Electrical generator		1	16	16				
Walls and circulation	10 %			52				
Sub total				568	165	93.720	0	
Total Section I.-						532.905	31.369	
Section II - Boarding								
Dormitory boys	60	4	264	1.056			60.000	
Dormitory girls	60	2	264	528			30.000	
Kitchen		1	180	180				15.00
Cafeteria	360	1	288	288			5.400	
Recreation room	100	1	115	115			2.000	
Walls and circulation	25 %			325				
Total Section II.-				2.452	255	625.460	97.400	
Section III - Housing								
House for Director		1	120	120			600	
House for Administration		3	100	300			2.100	
Walls and circulation	25 %			105				
Total Section III				525	255	133.875	2.900	
Total cost sections I + II + III						1.302.240	131.569	

Annex 3.1 (Contd.)

SCHEDULE OF ACCOMMODATION, AREA AND COSTS (Contd.)

IPEG - Kangaba / Niono

Type of accommodation	Number of pupils per Unit	No. of Units	Net area m2		Cost in thousands of Mfrs			
			Unit	Total	Construction per m2	Construction Total	Furniture	Equipment
PRIORITY I								
Cost IPEG Kangaba (distance factor 1.1) 1/						1.432.460	144.835	16.50
Cost IPEG Niono (distance factor 1.5) 1/						1.497.572	151.415	17.25
Cost IPEG Kangaba (built under direct State supervision) 1/						716.230		
Cost IPEG Niono (built under direct State supervision) 1/						748.786		
Cost site development Kangaba 2/						254.869		
Cost site development Niono 2/						264.635		
PRIORITY II								
Teacher housing 1 couple		10	50	500				
Walls and circulation 25 %				125				
				625	255	159.375	6.600	
Cost teacher housing Kangaba 3/						175.312		
Site development teacher housing Kangaba						17.530		
Cost teacher housing Niono						183.281	6.900	
Site development teacher housing Niono						18.328		
Cost teacher housing Kangaba built State supervision						87.656		
Site development teacher-housing Kangaba built State supervision						17.530		
Cost teacher housing Niono built State supervision						91.640		
Site development teacher housing Niono built State supervision						18.328		

Note:
1/ Unit prices are for stabilized earth construction prepared by private contractors. Prices may be cut in half if work done under direct State supervision (forced account)
2/ Roads and utilities - 15 % of costs of new construction + provision 40 million MFr for water tower and electricity power generator
3/ With distance factor.

Annex 3.2

CHARACTERISTICS OF THE PREMISES AND SPACE STANDARDS

IPEG - 360 boarding students - 240 boys, 120 girls

Type of Premises	No. of pupils per unit	Area per pupil	Area per room in m2	Description
Teaching and Common Services				
. Classroom	48	1.5	72	Blackboard + display + storage space (cupboard and shelves Natural and artificial lighting - Twin tables
. All-purpose laboratory	48	2.2	106	Rows - laboratory work bench for teacher - water - gas - electricity - twin work benches for pupils (water-gas-electricity) - side sink - security shower - blinds - stools and blackboard
Science preparation and storage room			20	Shelves and cabinets well ventilated - preparation table
Physics preparation room and storage			20	Shelves and cabinet well protected from dust - preparation table
. Home economics shop family education	24	3.4	82	Laboratory work bench with water - dishware storage cupboa 4 4-burner gas ranges Preparation area and sink with 4 water spouts and refrigerator
			24	- Traditional kitchen in outside shed with wood pile
Sewing and cutting	24	3.4	82	- Cutting area on large tables - Area for 13 sewing machines - Ironing board - wash basin - dryer

NB : This Appendix contains only the first page, provided as an example

Annex 4

COSTS OF EQUIPMENT AND RAW MATERIALS

SUMMARY OF COSTS

1. Equipment and Materials

1.1. Equipment (list attached)	Cost (in MFrs) 4 years
Library	14,860,000
Administration	6,750,000
Family education	2,245,000
Carpentry	1,563,280
Blacksmithing	1,872,200
Wood-carving	1,710,535
Bricklaying	725,200
Leatherwork	265,480
Weaving	3,200,000
Workshop products	86,900
Laboratory	4,011,000
Laboratory material	200,000
Agriculture	30,501,000
Vehicles (2)	23,000,000
Sub-total	90,991,195
Miscellaneous equipment	15,000,000
Total equipment	105,991,195
With distance factor	238,479,000 1/
For Kangaba (1.1)	116,590,000
For Niono (1.15)	121,889,000

1.2. Raw materials

For one IPEG for 4 years:	16,632,000
With distance factor	37,423,000 1/
For Kangaba (1.1)	18,295,000
For Niono (1.15)	19,127,000

1/ Reminder: Annual expenses for an IPEG

Maintenance equipment (5% annually)	5,961,975
Raw materials	4,677,875

Annex 4 (Contd.)

LIST OF EQUIPMENT

1. Equipment for Specialized Rooms

Description-Teaching-Furniture	No.	Unit Price	Total Price MFr
Library			
16 mm sound movie projector, 220 V, optical and magnetic reader with spare bulbs	1	1.500.000	1.500.000
Automatic remote-controlled slide projector 24 x 36 mm, 220 V + bulb	2	175.000	350.000
Opaque projector (projection 30x40 cm) 220 V, with spare bulb	1	250.000	250.000
Overhead projector technical format 28.5 28.5 x 28.5 cm, 220 V + spare bulb	1	350.000	350.000
Splicer for 16 mm film	1	15.000	15.000
Mobile beaded screen with tripod 180 x 240 cm	1	45.000	45.000
Books for the library	3000	4.000	12.000.000
Administration			
Semi-automatic 2-cylinder stencil duplicator, printing 21 x 34, 220 V	2	1.500.000	3.000.000
Simple typewriter (large carriage)	3	750.000	2.250.000
Adding machine	2	750.000	1.500.000
Truck	1	18.000.000	18.000.000
504 Peugeot pick-up truck	1	5.000.000	5.000.000
Family Education			
Flat dishes	25	1.500	37.500
Soup plates	25	1.500	37.500
Large glasses	25	400	10.000
Stainless-steel forks	20	500	10.000
Stainless-steel soup spoons	20	500	10.000
Large and small knives	20	750	15.000
Bowls	20	1.000	20.000
Cups	20	500	10.000
2-liter stainless-steel pitchers	5	3.000	15.000
Gas ranges with oven	4	300.000	1.200.000
Chopping block	1	5.000	5.000
Assortment of pots, pans, ladles, strainers, dishes, knives, choppers, vegetable grinders, pressure cookers, etc.	2	150.000	300.000
Irons	15	5.000	75.000
Ironing board	2	25.000	50.000
Refrigerator capacity 325 liters	1	200.000	200.000
Charcoal ovens	10	5.000	50.000

Annex 5

EXPENDITURES FOR PERSONNEL FOR ONE IPEG

FUNCTION	STAFF SIZE						Annual Salary Cost(1) thousands of MFrs)	
	A	B	C	D	Contract	Total	Average per employee	Total
Teaching Staff								
Psycho-Pedagogy	4					4	1.347	5.388
Humanities	3					3	1.347	4.042
History-Geography	1					1	1.347	1.347
Physical Sciences	1					1	1.347	1.347
Biological Sciences	1					1	1.347	1.347
Mathematics	2					2	1.347	1.347
Agriculture		2				2	1.112	2.224
National Languages		1				1	1.112	1.112
Home economics		2				2	1.112	2.224
Physical Education		1				1	1.112	1.112
Drawing		1				1	1.112	1.112
Music		1				1	1.112	1.112
Carpentry			1			1	606	606
Leatherwork			1			1	606	606
Wood-carving			1			1	606	606
Blacksmithing			1			1	606	606
Weaving			1			1	606	606
Bricklaying			1			1	606	606
Non-Teaching Staff								
Director General			1			1	2.684	2.684
Director of Studies			1			1	2.289	2.289
Chief Proctor						1	1.277	1.277
Advisor-Directed activities			1			1	1.262	1.262
Day School supervisors				1		1	739	739
Monitors for Male boarders				4		4	739	2.958
Monitors for Female boarders				2		2	739	1.478
Secretary				1		1	606	606
Bursar		1				1	1.142	1.142
Bursar's assistant		1				1	933	933
Bookkeeper				1		1	606	606
Clerk				1		1	606	606
Typists					2	2	334	668
Orderly					1	1	234	234
Watchman					2	2	234	468
Registered Nurse		1				1	751	751
Paramedic		1			1	1	334	334
Midwife		1				1	751	751
Head Cook					1	1	271	271
Cook's helpers					2	2	232	464
Busboys					5	5	223	1 115
Laundryman					1	1	223	223
Laborers					6	6	234	234
Librarian		1				1	1.097	1.097
Total								51.887

For the C2 component 51,887 x 2 = 103,774 MFrs

1/ Salary + bonus + allowances or other kinds of compensation

Annex 6

ENTERING STUDENT ENROLMENT AND GRADUATING IPEG STUDENT/TEACHERS

1978/79 - 1981/82

School year	Kayes		Bamako		Sikasso		Diré		Total	
	Admitted	Graduated	Admitted	Graduated	Admitted	Graduated	Admitted	Graduated	Admitted	Graduated
1978/79	178	121	304	292	155	149	192	99	829	661
1979/80	174	106	328	-	167	134	143	131	812	371 1/
1980/81	341	95	278	-	251	145	225	86	1.095	326 1/
1981/82	298	111	387	399	265	192	269	92	1.219	794

1/ This drop in the number of graduates is due to the fact that pupils were suspended for two years in the IPEG in Bamako. That is also one of the causes of an increase in enrollment for pupils entering in 1980/81 and 1981/82

NOTE: In recent years, the change in the number of students admitted and graduated from the IPEGs has made it difficult to forecast the number of graduates. The figure of 785 graduates per year was used for 1984 on the basis of forecasts made by the Education Sector Study. The figure of 785 graduates means that about 1150 pupils will be admitted per year, meaning the average for 1980/81 - 1981/82.

Annex 7

TECHNICAL ASSISTANCE

TERMS OF REFERENCE

Job : Expert in curriculum development for teacher training.

Place of assignment : General Directorate of the National Pedagogical Institute (IPN) in Bamako.

Duties:

Under the authority of the Director General of the National Pedagogical Institute of Bamako, this expert will help to develop curricula for the new IPEGs, and especially to integrate practical work with academic subjects and pedagogy.

The consultant will give his technical opinion on the following points.

(a) participating in defining a new profile for pupil/teachers;

(b) preparing the contents of pedagogical studies for academic and practical disciplines;

(c) integrating practical work and pupil-teacher training;

(d) suggesting the appropriate pedagogical methods to be used in the curriculum for pupil-teacher training in the new rural IPEGs.

Qualifications:

(a) University education in the field of education, with special emphasis on curriculum development;

(b) Experience in teacher training;

(c) Experience in rural basic education in other Third World countries;

(d) Ability to do teamwork.

Language Requirements:

Excellent proficiency in French. Knowledge of English desired.

Duration: 6 months.

EXAMPLE N° 5: LOCATION AND ACCOMMODATION SCHEDULE OF AN EXTENSION AND IMPROVEMENT PROJECT FOR A TEACHER TRAINING ESTABLISHMENT

C.3-4: Guéckédou ENI

The existing site of the Guéckédou ENI (teacher training establishment) covers an area of about 11 hectares, sloping slightly towards the North and West. About one hectare of this in the North of the site is available for extension. The school has a 30 KVA electric generating unit, but it needs re-wiring. The water supply is defective, and requires the construction of a pipe to convey water from the river, and a water storage tank. Various parts of the existing buildings (floors, joinery, roofs) are in a state of disrepair. The cost of renovation work varies, from one building to another, between 27% and 60%.

See Annex III-C3/17 for the accommodation schedule, areas and costs. The cost of furniture is estimated at 10% of the amount of the work for Section I (teaching premises and general facilities) and 12% of thework for the new dormitory, plus 592,700 Sylis for additional furniture for the existing dormitories and the common-room (30% of 12% corresponds to 15% of the cost of new construction work, plus a provision for pumping water from the river and the installation of a water tank. The estimated cost of architectural surveys is 1,562,120 Sylis, representing 5% of the cost of new construction (Conakry price) plus 5% of the cost of renovations and improvements.

Costs

(a) Capital outlay: Summary of capital costs of sub-sector C 3; see Annex III-C 3/18.

(b) Annual running costs per component of Sector C 3; see Annex III-C 3/19.

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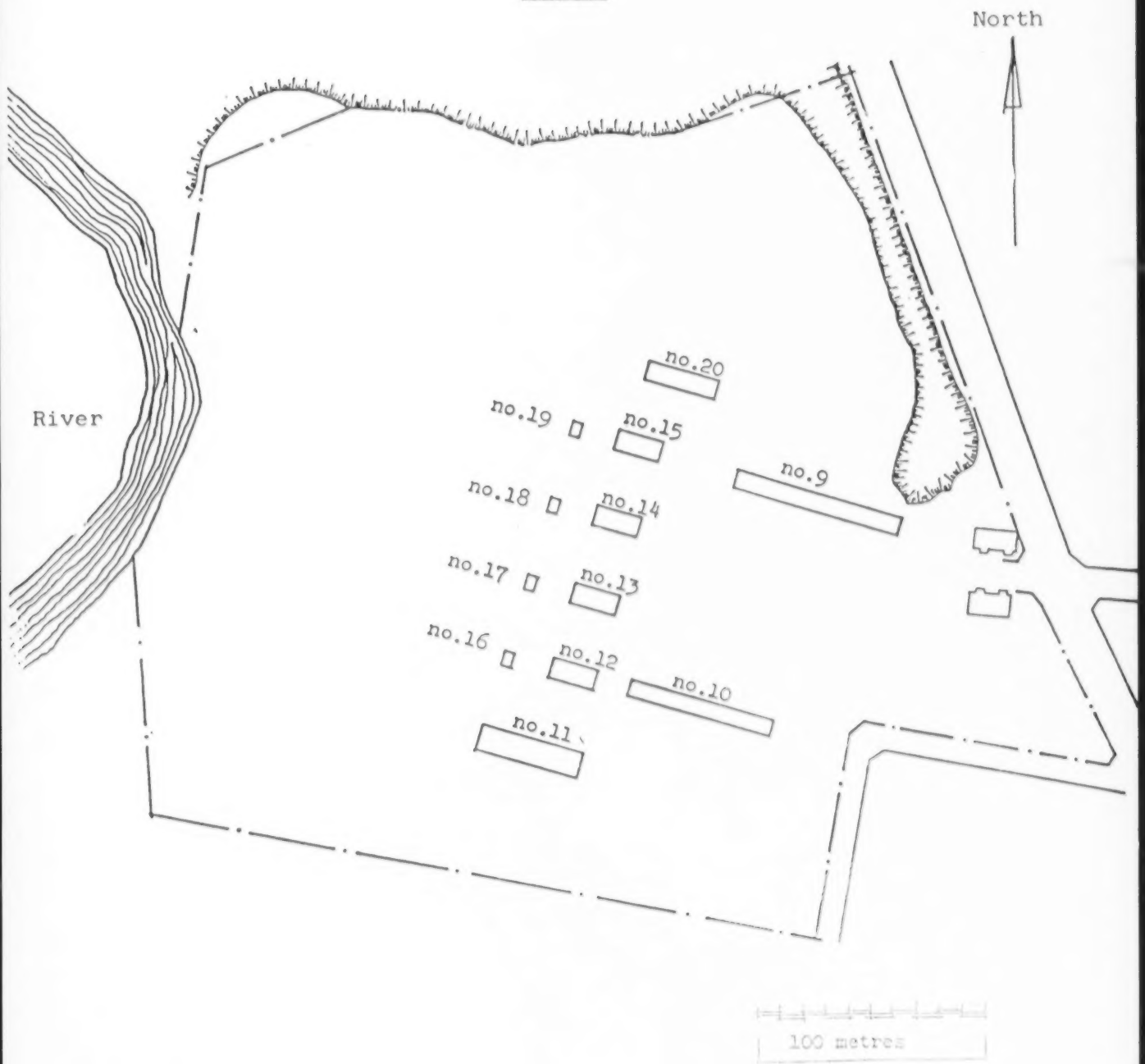
Guéckédou ENI

LAYOUT



ACCOMMODATION SCHEDULE, AREAS AND COSTS

C 3-5: Gueckedou ENI. Enrolment: 360 (planned in 2nd project); 360 (planned in 1991). Boarding students.

Accommodation schedule	N° of students per unit	N° of units	Net area in sq.m. Unit	Net area in sq.m. Total	Costs (in Sylis) Construction per m2	Construction Total	Furniture	Equipment
Section I - Teaching & general facilities				801	16.800	13.456.800	1.345.680	1.125.00
New construction				257	16.800	4.317.600	431.760	
Science labs	40	2	88	176				
Students' washrooms		1	30	30				
Walls & corridors (25%)				51				
				544	16.800	9.139.200	913.920	
Improvements								
Building 9 (35%)			630	220				
7 classrooms								
Building 10 (40%)			580	232				
2 workshops								
1 storage area								
2 observation rooms								
Building 20 (31%)			297	92				
Library								
Administration								
				1.214	16.800	20.395.200	1.358.780	825.60
Section II - Boarding				675	16.800	11.340.000	766.080	345.60
New construction				380			766.080	345.60
Dormitory	120	1	380	160				
Washroom unit		1	160	135				
Walls & corridors (25%)				539	16.800	9.055.200	592.700	480.00
Improvements								
Bdg. 12 Dormitory (27%)			220	59				
Bdg. 13 " (27%)			220	59				
Bdg. 14 " (30%)			220	66				
Bdg. 15 " (27%)			220	59			592.700	
Bdg. 16 WC- Shower (32%)			40	13				
Bdg. 17 " (35%)			40	14				
Bdg. 18 " (32%)			40	13				
Bdg. 19 " (32%)			40	13				
Bdg. 11 (60%)								
Kitchen, refectory, common-room			405	243				480.00
Total				2.015	16.800	33.852.000	2.704.460	1.951.60

2.0 Project document

2.1 Introduction

1. Subsection 2.3, below, sets forth an annotated project document format. This format is in effect a modified version of the familiar descriptive format in use since 1975. It supersedes the provisional guidelines for the "Utilization of New Project Document Format" issued under cover of a "Dear Colleague" letter from the Administrator dated 26 October 1982, and the "Supplemental Guidelines on Project Document Format" (UNDP/PROG/119, UNDP/PROG/FIELD/179) issued 20 December 1985.

2. The core structure of the project contained in these instructions consists of a hierarchy of basic project elements as follows:

Development objective
Immediate objectives
Outputs
Activities
Inputs

3. A project formulated according to this structure is intended to develop in a certain sequence. Namely, the inputs or raw materials are to be transformed by the activities to produce specific outputs, which, when joined together, will lead to the accomplishment of the immediate objectives. The accomplishment of the immediate objectives will in turn contribute at least in part, to the achievement of the broader development objective. This is the basic theory or "logic" of the UNDP project design, upon which the instructions which follow are based.

2.2 Model table of contents

Cover page

A. Context

1. Description of subsector

2. Host country strategy

3. Prior or ongoing assistance

4. Institutional framework for subsector

B. Project justification

1. Problem to be addressed; the present situation

2. Expected end of project situation

3. Target beneficiaries

4. Project strategy and implementation arrangements

5. Reasons for assistance from UNDP/executing agency

6. Special considerations

7. Co-ordination arrangements

8. Counterpart support capacity

C. Development objective

D. Immediate objective(s), outputs, and activities

1. Immediate objective 1

1.1 Output 1

Activities

1.1.1 activity 1

1.1.2 activity 2

1.1.3 activity 3

1.1.4 activity 4

D. Immediate objective(s), outputs, and activities (continued)

1.2 Output 2

Activities

1.2.1 activity 1

1.2.2 activity 2

1.2.3 activity 3

1.3 Output 3

Activities

1.3.1 activity 1

1.3.2 activity 2

2. Objective 2

2.1 Output 1

Activities

2.1.1 activity 1

2.1.2 activity 2

2.2 Output 2

Activities

2.2.1 activity 1

2.2.2 activity 2

2.2.3 activity 3

E. Inputs

F. Risks

G. Prior obligations and prerequisites

H. Project review, reporting and evaluation

I. Legal context

J. Budgets

K. Annexes

I. Work plan
II. Schedule of project reviews, reporting and evaluation
III. Standard legal text for non-SBAA countries (if required)
IV. Training programme (if required)
V. Equipment requirements (if required)
VI. Job descriptions (if required)
VII. Framework for effective participation of national and international staff (if required)

STANDARD CONTENT AND FORMAT - UNDP PROJECT DOCUMENT
Sample cover page

(Line-by-line instructions for the completion of the cover page may be found in section 30303 of the PPM.)

UNITED NATIONS DEVELOPMENT PROGRAMME
Project of the Government of

PROJECT DOCUMENT

Number and title:	
Duration:	UNDP and cost sharing financing
Project site:	
ACC/UNDP sector & subsector: a/	
Government sector and subsector:	UNDP
Government implementing agency:	IPF $
Executing agency:	Other (specify)) $
[Co-operating or associated agency	Govt. or third-party
(if applicable)]:	cost sharing (specify)$
Estimated starting date: (month, year)	UNDP & cost sharing Total: $
Government inputs: (local currency)	
(in kind)	
(in cash)	

Brief description: (Provide a succinct statement of what the project is intended to achieve and its major features, including whether it is intended to provide institution building, direct support or some other type of assistance. Specify any "special considerations". (See heading B-6.)).

On behalf of:	Signature	Date	Name/title (please type)
The Government:			
Executing agency:			
UNDP:			

United Nations official exchange rate at date of last signature of project document:
$1.00 = _____

a/ Please study the ACC Programme Classification Extended for UNDP Purposes carefully in section 30304, subsection 4.0, and assure that the code and title used most accurately reflect the primary area of project activity.

D. Objectif(s) immédiat(s), produits et activités

1. Objectif immédiat 1

1.1 Produit 1

Activités

1.1.1 activité 1

1.1.2 activité 2

1.1.3 activité 3

1.1.4 activité 4

1.2 Produit 2

Activités

1.2.1 activité 1

1.2.2 activité 2

1.2.3 activité 3

1.3 Produit 3

Activités

1.3.1 activité 1

1.3.2 activité 2

2. Objectif 2

2.1 Produit 1

Activités

2.1.1 activité 1

2.1.2 activité 2